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ABSTRACT

Sponsored by the Title III Elementary and Secondary Education Act Project "Discovery Outdoor Education", this guide is a collection of inexpensive, innovative, homemade equipment and devices for physical activities. Although designed for the impaired, disabled, and handicapped, these materials are adaptable to and applicable for groups and individuals of all ages for use in physical education, recreation, camping, playground, and related programs. With emphasis on creative, non-restrictive play, this guide presents brief sections on balance and resistance activities with a major section devoted to equipment relative to balance, vaulting and jumping, climbing and hanging, muscular strength and endurance, and rhythm and games. Each device is presented via a detailed sketch accompanied by delineation of purpose, possible activity use, helpful hints, safety considerations, materials needed for construction, and the approximate cost (from $1.00 to $35.00). Appendices A, B, C, and D present contributors, an appraisal guide (a questionnaire designed to elicit the user's appraisal of strengths and/or weaknesses of the equipment), a questionnaire requesting suggestions for additional equipment, and a classification index wherein equipment is indexed by purpose. (JC)

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HOMEMADE INNOVATIVE PLAY EQUIPMENT

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Guide for Homemade Innovative Play Equipment for Activities in Physical Education and Recreation for Impaired, Disabled and Handicapped Participants

Sponsored by: ESEA Title III Project
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This guide was prepared by L. Roger Pearson, Research Assistant in the AAHPER Information and Research Utilization Center in Physical Education and Recreation for the Handicapped. Thanks and appreciation are also extended to the many individuals and representatives of various groups who directly and indirectly contributed to the success of this guide. Those who benefit the most from the efforts of all concerned will be impaired, disabled, and handicapped persons who have greater opportunities and enriched experiences through expanded physical education, recreation, and related programs because of these efforts.

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PREFACE

Greater emphasis and increased participation in physical education, recreation, and related programs by impaired, disabled, and handicapped persons dictate the need for more varied equipment, supplies, and adapted devices. Limited budgets, large groups, different interests, diverse abilities, and need for many individuals to be active in a variety of activities at the same time further emphasize the necessity for and importance of appropriate, functional, and sufficient equipment and supplies. It is to the end of meeting these needs that this collection of ideas for homemade, innovative, and inexpensive equipment and devices has been developed. The ESEA Title III Project, "Discovery Through Outdoor Education," wishes to share this guide with you in hopes that impaired, disabled, and handicapped persons will have greater opportunities and enriched experiences.

Final material was developed by L. Roger Pearson, Research Assistant, Information and Research Utilization Center in Physical Education and Recreation for the Handicapped. Much of the initial material was collected, reviewed, and processed by a volunteer committee of the American Association for Health, Physical Education, and Recreation Unit on Programs for the Handicapped. Members of this committee included Richard Bergner, Physical Education Instructor, Greendale Junior High School, Greendale, Wisconsin; Henry Donatelli, Administrator, Riverview Special School, Manitowoc, Wisconsin; James Grimm, Director, Health Physical Education and Recreation, Hamilton City School District, Hamilton, Ohio; Gordon Jensen, Supervisor of Health and Physical Education, State Department of Public Instruction, Madison, Wisconsin; Robert Johnson, Assistant Professor, Department of Physical Education and Recreation, University of Kentucky, Lexington, Kentucky; Philip B. Knobel, Administrator, Walworth County Special School, Elkhorn, Wisconsin; Joseph Kolba, Physical Education Teacher, Horace Mann School, Fargo, North Dakota; Thomas P. Lombardi, Executive Director, Pima County Association for Retarded Children, Tucson, Arizona; Mrs. Janet Pomeroy, Founder and Director, Recreation Center, San Francisco, California; John Unruh, Associate, The Institute for the Rehabilitation of the Brain Injured, Media, Pennsylvania; Donald Voss, Physical Education and Industrial Arts Instructor, Walworth County Special School, Elkhorn, Wisconsin. Individuals who contributed ideas, materials, and information about specific devices to the original committee are appended to this Guide.

This Guide suggests possible uses for homemade, innovative, and inexpensive equipment and devices for physical education, recreation, camping, playground, and related programs. Although designed to help meet special and specific needs of impaired, disabled, and handicapped participants, these materials are adaptable to, applicable for, and usable by individuals and groups of all ages, descriptions, and functional levels. Basically, this is an attempt to encourage and stimulate the reader to be imaginative, innovative, resourceful, and original. There is no magic in the depicted devices or listed activities; each become magical only when users improvise, modify, and adapt to meet needs, interests, and abilities of those they serve.

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Just as many individuals have contributed to the success of this Guide, readers are encouraged to share their success stories and promising practices with others. Forms for this purpose and evluation of the Guide are included in the back of this publication. Return these as indicated so fresh ideas and new devices can be added periodically. Only through cooperation and with a willingness to share can opportunities and experiences for all children and youth, especially impaired, disabled, and handicapped, to be expanded and enriched.

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INTRODUCTION

Do not too much regard bumps on the forehead, rough scratches, or bloody noses; even these have their good influences. At worst, they affect only the bark, and not the system like the rust of inaction. Samuel Gridley Howe

In many instances attitudes toward impaired, disabled, and handicapped persons have changed little since they were left on mountain sides to die in ancient Greece. Today many of these same individuals are sent away--some to die, some to exist, others to sit, watch, and warned to stay out of the way!

Attitudes are changing though. Recognition of personal rights and abilities, and the worth and dignity of each person in terms of individual strengths has promoted the concept of normalization and resulted in many impaired, disabled, and handicapped persons returning to the mainstream of society. Discriminating integration is progressing in many areas; unfortunately physical activity and movement are still neglected in too many programs.

As people become less active and society more mechanized, developmental movement experiences become more imperative. Many rural children who used to climb hills, walk logs, and swing from trees are now relegated to sedentary activities, television, movies, and spectator sports. Urban children once learned to roller skate, ride bicycles, and play fun games on city sidewalks while dodging pedestrians, cars, cracks, and curbs!

Play has become so formal and structured that it is now the child's counterpart of the organization man. Children are over coached on proper performance techniques at the expense of exploration and experimentation; manufacturers design and build intricate toys where a child simply pushes a button and watches--parents promote and support both approaches. Creativity is stifled to condition the child to perform properly! Play is the work of childhood, a means of discovery, communication, and expression. Successful play results in growth, development, and learning. When adherence to and attainment of proper performance standards dominate, and lack of equipment permeates programs, learning and development are suppressed. Confined play results in limited success, restricted growth, and insufficient development.

A rationalization often given for not providing movement experiences is inadequate facilities, inappropriate equipment, and insufficient supplies. Administrators, parents, and the lay public shutter at the thought of providing only one book for twenty classroom students; they think nothing of providing only one ball for fifty children in physical education! Every child has individual needs and personal interests that change as he succeeds, grows, develops, and learns. These needs cannot be met when one must await his turn behind forty-nine other children!

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Each impaired, disabled, and handicapped child is confronted with dual problems--the normal trials and tribulations faced by all children and the complication of his condition. Limited mobility makes it difficult to get to equipment, so use at times tends to be difficult if not impossible. Certain typical pieces of equipment, such as free flying swings, can be extremely dangerous to a visually or hearing impaired child. These and other problems inappropriately handled can result in lack of participation, withdrawal, or disruptive behavior. Cause and effect relationships are easily and often confused--do emotional problems cause failure, frustration, and withdrawal, or do failure, frustration, and withdrawal cause emotional problems?

In many instances budget limitations restrict or prohibit acquistion of needed equipment. There is no limitation or restriction on ingenuity, invention, creativity, and innovation. When additional new or special equipment is needed, check storerooms, closets, and basements for available materials and build devices to meet needs of those served.

Equipment is to be used, not placed in a glass case for display! Excessive detail hampers construction and use; easily understood construction enhances flexability of use and allows for adaptation to needs and characteristics of individuals of different ages, various functional abilities, and diverse interests. Ease of construction adds to safety by emphasizing sturdiness instead of intricacy of design.

Each individual situation dictates the amount of necessary instruction. Children, especially in new, different, difficult, and complex situations, need some direction and guidance to learn efficiently. Children understandably tend to stick to the familiar and sure because of feelings of security in knowing what is safe and because of greater chances for success. Initially, structure learning experiences, show movements and patterns, and indicate activities. With time, confidence, and success, encourage them to explore, create, solve problems, and do their own thing. As each becomes more familiar with equipment and devices, innate creativity begins to emerge. Remember, Christmas morning when a child throws his new toys in the corner so as to have more room to play with paper and boxes! A variety of equipment can be arranged in a challenge or obstacle course to provide for individual as well as group participation. These can also be used for station or circuit activities.

Homemade, innovative playground equipment has many, varied pluses:

- Joint projects between physical education and industrial arts personnel enhance interdepartmental cooperation. Encourage students to design and build something of use instead of often assigned bookends, ash trays, broom holders, and bird houses!
- Large projects enhance interdisciplinary cooperation and multiagency coordination between school and community.
- Innovative design and construction lead to innovative use.

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- Pride in maintenance and use becomes obvious when students create their own equipment and devices.
- Increased interest stimulated by innovation and adaptation of the instructor or leader is contagious.
- Success is enhanced by experimenting, exploring, and eliminating the idea of a correct use.
- Large varieties and amounts of equipment add to interest and promote step-by-step learning progressions.
- As student interest and participation increase, various difficulties or defects become more obvious; the sooner problems are diagnosed, the sooner remediation can be started.

Whenever designing and constructing equipment:

- Be sure it's safe.
- Be sure it's sturdy. Dense, non-splintering characteristics of maple make it very suitable for equipment.
- Be sure it's right for the age. Consider functional and developmental ages as well as chronological and mental ages. A seventeen year old retarded doesn't enjoy playing kiddie games with first graders!
- Be sure paint is non-toxic.
- Be sure it's kept clean and maintained properly.
- Be sure to discard it properly when it can no longer be safely repaired.

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KEY TO ABBREVIATIONS AND TERMINOLOGY

D - Diameter
Fig - Figure
Lg - Long
R - Radius
Sq - Square
Thk - Thick
Typ - Typical; same shape, size and dimensions for all similar parts.

Agility - Change the direction of body movement quickly and easily.

Cardiorespiratory Endurance - Develop ability of heart and lungs to sustain vigorous activity for increasingly longer periods of time.

Coordination - Combine movements of different parts of the body into smooth, synchronized patterns.

Dynamic Balance - Maintain appropriate posture and alignment of body parts while the body is in motion.

Flexibility - Bend and stretch body parts.

Muscular Endurance - Develop ability of muscles and muscle groups to sustain vigorous activity for increasingly longer periods of time; implies presence of muscular strength.

Power/Speed - Perform forceful, quick muscular movements.

Spotting - Provide assistance to participant in the performance of an activity and/or be ready to offer assistance if the participant loses rhythm, balance, or begins to fall.

Static Balance - Maintain appropriate posture and alignment of body parts without motion.

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DETAILED PROGRESSION

A listing of *Possible Activities* is included with each drawing to suggest how devices can be used to improve specific components of physical fitness, foster fundamental movement patterns and basic motor skills, and promote perceptual-motor development. These are representative examples of activities--a point of departure--and not intended to be complete or exhaustive. This is intended to stimulate creativeness, inventiveness, and resourcefulness of each reader. In this way activities can be introduced and adaptations and modifications made according to needs, interests, abilities, and impairments of each participant. Although differences among participants must be taken into consideration, effective leaders recognize similarities from one activity, situation, or environment to another; they reinforce concepts and relate the old to the new, the familiar to the unfamiliar. Too often teaching is done in isolation, without capitalizing on these similarities.

This *Detailed Progression* of balance activities is included so the *Guide* can be adapted more universally and with greater flexibility. The balance progression is not intended to be an exhaustive or all inclusive source of activities; it provides ideas and suggestions as to what can be done to adapt balance activities to meet individual needs. This *process*--breaking down skills, movements, and patterns into small sequential steps, incorporating various approaches to teach the same skills, movements, and patterns, and using the same device or activity for different purposes--can be applied to other fitness, movement, motor; and perceptual-motor areas. Five levels of balance activities used in this detailed sequential progression suggest how variations can be introduced to make activities more challenging or easier, detail ways activities can be applied in different situations, and provide helpful hints that have been used successfully by others. This information serves as a starting point where the *process* shown and described can be applied to expand and extend activities according to needs of participants. This Guide therefore is a beginning, not an end, with unlimited and untapped potential.

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BASIC BODY BALANCES

Activities:

- Take position on hands, knees, and feet with legs and arms about shoulder width apart.

- Extend left (right) arm forward (backward, sideward) to shoulder level.

- Extend left (right) leg backward.

- Move arms and legs in various combinations--

  - o Lift both arms.
  - o Lift both feet.
  - o Lift arm and leg on same side of body.
  - o Lift arm and leg on opposite sides of body.
  - o Lift both arms and one (other) foot.
  - o Lift both feet and one (other) arm.
  - o Lift both feet and both arms (balance on knees).

Variations:

- Lift knees and support self on hands and toes; move arms and legs in various combinations--

  - o Lift left (right) arm forward (backward, sideward) to shoulder level.
  - o Extend left (right) leg backward.
  - o Lift arm and leg on same side of body.
  - o Lift arm and leg on opposite sides of body.
  - o Kick both feet into air.

- Sit, raise buttocks off floor, and support body on hands and feet; move arms and legs in various combinations--

  - o Extend left (right) leg forward.
  - o Extend left (right) arm backward (forward, sideward).
  - o Lift arm and leg on same side of body.
  - o Lift arm and leg on opposite sides of body.
  - o Kick both feet into air.

- Lie on side with arms, one on top of other, extended overhead and legs, one on top of other, fully extended; raise top arm and leg vertically attempting to make contact with hand and foot without bending elbow or knee; hold for designated count or length of time.

- Lie on back, bring legs to 45 degree angle, extend arms forward to touch toes, and hold balance on buttocks.

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Helpful Hints:

- Make designated movements without moving other parts of the body.
- Perform activities with eyes open, then repeat with them closed.
- Start youngster, if necessary, flat on his back or stomach rather than in support positions.

BALANCE IN MOTION

Activities:

BEETLE

Creep on hands and knees.

MONSTER

Support body on hands and feet; walk, keeping arms and legs straight.

BEAR WALK

Support body on hands and feet; walk by moving right arm and right leg together, then left arm and left leg; keep arms and legs straight.

LAME DOG

Support body on hands and feet, elevate left (right) leg, and move on both hands and right (left) foot; change position of feet after going a designated distance.

CRAB

Sit, raise buttocks off floor, support body on hands and feet, and move backward (sideward).

SPIDER

Sit, raise buttocks off floor, support body on hands and feet, and move forward.

SEAL

Support body on hands and feet; keep feet together and legs straight; walk forward with hands; drag legs behind.

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Activities: (continued)

COFFEE GRINDER

Support body on right arm and both feet; keep arm and legs fully extended with feet slightly apart; move feet and body in circle using right arm as a pivot; repeat using left arm.

LEANING TOWER

Support body on extended right arm and hand and side of right foot; hold left arm against side and place left leg on top of right leg; extend left arm straight up and hold position for five (10, 15, 20) seconds; return to starting position, extend left leg straight up and hold for designated time; return to starting position, extend both left arm and leg and hold for designated time. Rest between different movements if necessary and repeat movements with right arm and leg.

CRAZY KNEES

Balance and walk on knees.

Helpful Hints:

- Challenge youngsters by having them perform a variety of *Basic Body Balances* in motion such as animal walks, imitative activities, and in other original ways.
- Add variations by having youngsters move in different directions (forward, backward, sideward, over and under obstacles), in different ways (lift, carry, or extend arms and legs in various combinations), and at different speeds (slow, slower, fast, faster).
- Perform activities with eyes open, then repeat with them closed.

STORK STAND SERIES

Activities:

- Stand on left foot with hands on hips and right foot placed against inside of left knee; reverse and stand on right foot with left foot placed against inside of right knee.

Variations:

- Fold arms across chest.
- Hold hands against thighs.
- Extend arms above head.
- Extend arms in front of body at shoulder level.

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Variations (continued)

- Extend arms to sides at shoulder level.
- Hold one arm in one position and other arm in another position (such as high-low; front-back; up-down; front-side).
- Hold free foot close to ground (forward, backward, sideward, different heights).
- Bend forward at waist until upper body is parallel to floor; extend free leg directly back until foot is held about shoulder level; keep extended leg straight, head up, and arms directly to sides at shoulder level.
- Perform other tasks while holding balance--
  - Bounce a ball.
  - Play catch.
  - Hold objects (beanbags, weighted bleach bottles) of different weights in each hand.
  - Balance objects (beanbags, balls) on different parts of body (palm of hand, back of hand, arm, elbow, head, shoulder).

Helpful Hints:

- Make designated movements without moving other parts of the body.
- Hold each position for five (10, 15, 20, 30) seconds.
- Perform activities with eyes open, then with them closed.

AND AWAY WE GO

Activities:

- Perform *Ball's Body Balance*, *Balance to Motion* **Activities** and ***Stork*** *Stand Progression* within increasingly narrow boundaries.
- Walk (heel-toe, touch knee to heel) between designated points--increase distances and reduce width of boundaries gradually.
- Perform jump turns of increasing amounts (quarter, half, three-quarter, full, one and a quarter) within increasingly narrow boundaries.
- Perform various combinations such as walk from one point to another in one manner and return in another (walk to a point, turn, continue in another way).

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Helpful Hints:

- Introduce activities with balance board flat on floor and then place two 16" x 2" x 4" bases under balance board so that height off floor is increased gradually; criss cross other 2" x 4" bases under main balance board to increase height even more.
- Reduce support under balance board by using smaller 2" x 4" bases.
- Use only one 16" base the width of the balance board; turn length of balance board; reduce support by using smaller 2" x 4" bases; secure supports 4" and smaller with a wing nut or wooden peg.
- Use other objects such as tires and inner tubes.
- Devise other types of balance boards that offer additional challenges for youngsters--curve bottom support, make balance board itself smaller, attach top of board to springs.
- Perform *Basic Body Balances* and *Stork Stand Progression*.

BALANCE BEAM ACTIVITIES

Activities:

- Perform *Basic Body Balances*, *Balance in Motion Activities*, *Stork Stand Progression* and *And Away We Go Progression* on increasingly narrow balance beams.
- Perform various combative (hand wrestling, chicken fighting, bulling) activities with a partner.
- Devise own activities, combinations, and routines.

Helpful Hints:

- Use regulation low or high balance beam.
- Devise own balance beam from 2" x 4" boards; construct so either 4" or 2" side can be used.
- Introduce graduated balance beams in which sections get increasingly narrow (6", 4", 2", 1"); place in different patterns (straight, W, V, N, M, L).
- Perform activities with eyes open, then repeat with them closed.

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RESISTANCE ACTIVITIES
(Weight Training)

Resistance activities are to develop strength and endurance by making muscles work harder and longer. Weight training or lifting is the most common type of resistance activity; barbells, bars, and weights are not needed for these activities! Effective and inexpensive substitutes include:

- Broomsticks or wooden dowels with objects such as doorknobs attached.
- Car axles.
- Folding chairs.
- Window sash weights.
- Homemade barbells constructed with broomsticks or wooden dowels and different size tin cans filled with various amounts of cement.
- Bleach bottles filled with sand--increase amount of sand as youngsters get stronger.
- Stuffed animals--increase weight by putting more buckshot or sand in stuffed tiger, cat, or dog.
- Logs--use regular fireplace logs or make special exercise logs about 10-12 inches long, 5-10 inches in diameter, and about one-tenth of the youngster's weight.

Activities	*Starting Positions*	*Movements*
PRESS	Start weight from chest.	Lift weight over head in one continuous movement; extend arms fully until elbows are straight; lower weight to chest.
BEHIND NECK PRESS	Start weight from chest.	Lift weight over head and lower to a position behind neck; lift and lower weight from behind neck.
MILITARY PRESS	Sit on chair, bench, or floor; start weight from chest.	Perform same movements as in *press* or *behind neck press*.

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Activities	*Starting Positions*	*Movements*
BENCH PRESS	Lie on floor or bench; start weight from chest	Perform same movements as in *press*.
CURL	Start weight at thigh level with palms of hands facing away from body.	Bend elbows and lift weight to shoulder level without bending or rocking body; lower weight to starting position.
REVERSE CURL	Start weight at thigh level with palms facing toward body.	Perform same movements as in *curl*.
ROWING	Place feet slightly more than shoulder width apart; bend forward from waist until upper body is parallel to floor; hold weight off floor at ankle level.	Lift weight until it touches chest; lower weight to starting position.
UPRIGHT ROWING	Hold weight at shoulder level with hands as close together as possible; keep elbows higher than bar at all times.	Lower weight until elbows are straight; lift weight to starting position.
STRAIGHT ARM PULL OVER	Lie on floor or bench with arms extended over head; keep arms straight at all times.	Lift weight until it is directly over chest; lower weight until it rests on thighs; lift weight to position over chest and then to starting position.
BENT ARM PULL OVER	Lie on floor or bench; keep elbows bent fully throughout movements.	Bring weight as far forward as possible; return to starting position.

Helpful Hints:

- Concentrate on arms, shoulders, and chest since legs are best developed by running.
- Perform a given activity between eight and twelve times. More than 12 times indicates too little weight and it should be increased; less than eight times indicates too much weight and it should be decreased.

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Helpful Hints: (continued)

- Perform all activities in a *slow, smooth,* and *controlled manner.*
- Complete all movements and go through a full range of motion in all activities.
- Emphasize proper breath control by *inhaling* when lifting and *exhaling* while returning weight to starting position.
- Place feet a natural standing width apart and space hands evenly on bar unless otherwise indicated.

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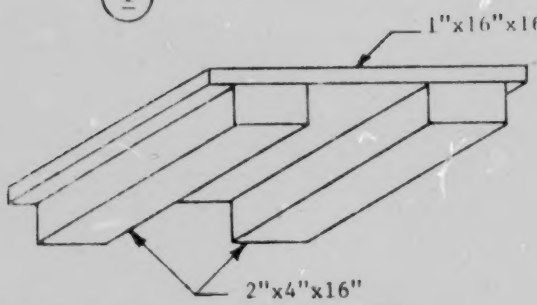
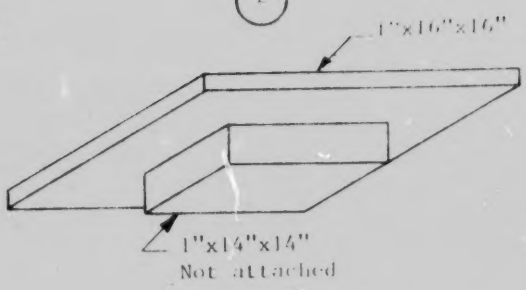


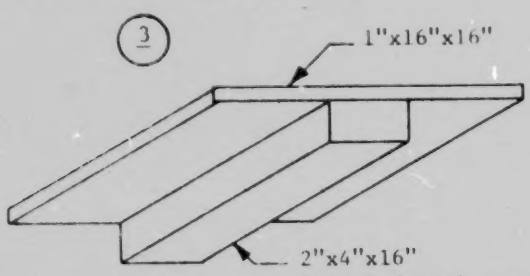
Note: Move supports toward middle to increase difficulty.

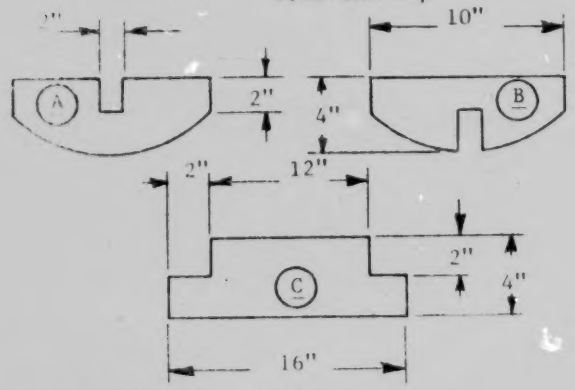
2



Note: Increase thickness or decrease side dimensions to increase difficulty.

3





Details for Boards 4 and 5

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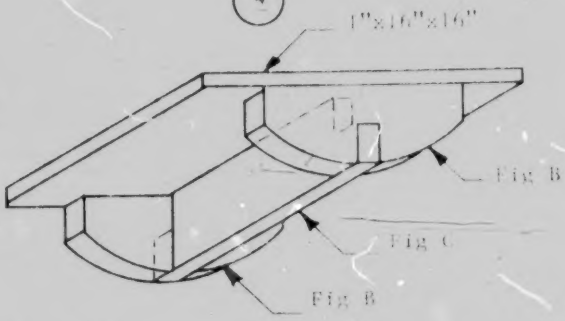

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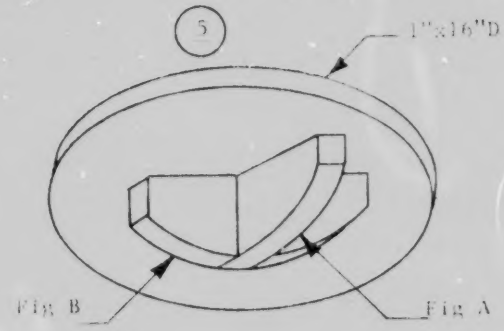

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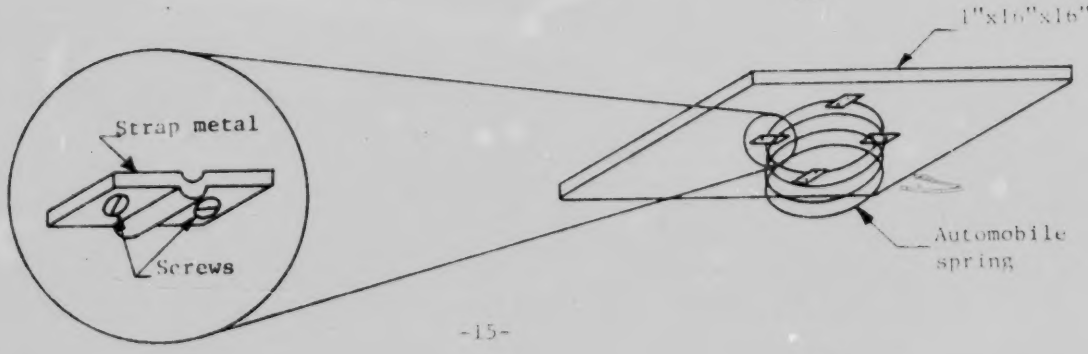

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PURPOSE: Develop and improve static balance and general, eye-hand, and eye-foot coordination.

POSSIBLE ACTIVITIES:

- Perform Basic Body Balances (p. 6), Stork Stand Progression (p. 8), Balance Board Activities (p. 10).
- Stand (sit, lie, kneel, squat on hands and knees), balance, and/or shift backward and forward, side-to-side.
- Have two or more people balance (change positions, play follow-the-leader, execute creative movements, take part in combative activities).
- Balance on one foot (toes, heels, one toe and one heal, outside/inside of feet) holding objects of differing weights.
- Balance while bouncing (rolling, catching, throwing, kicking) a ball; jumping rope (hoop, bicycle tire).
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

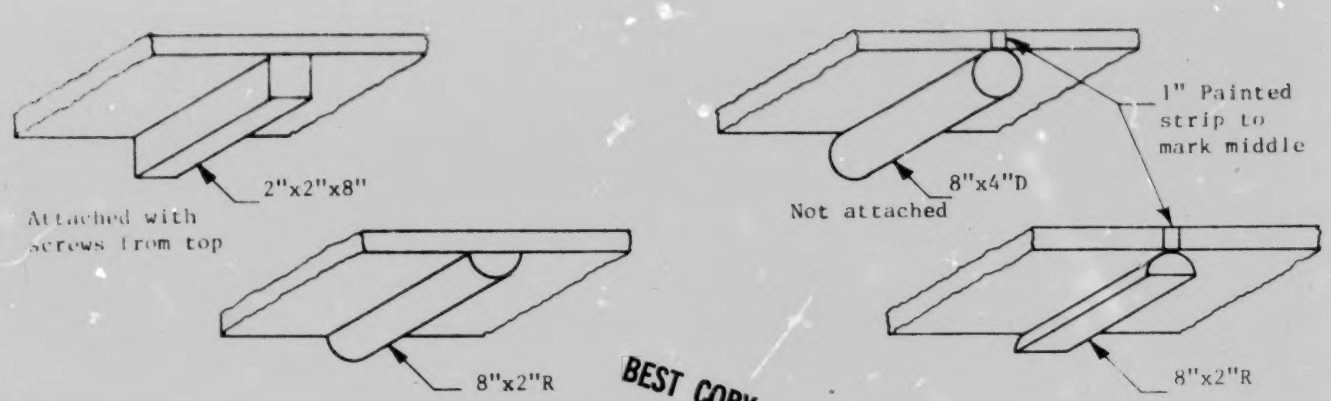
- Decrease length of board for greater difficulty.
- Decrease size of base for greater difficulty.
- Make base and/or support round or curved for greater difficulty.
- Draw (paint, use contact paper) footprints and/or handprints on board to aid beginners.
- Perform activities with eyes open, then repeat with them closed.

SAFETY CONSIDERATIONS:

- Provide spotting as necessary.
- Place on mats, grass or other soft surface.
- Store in safe place when not in use.

MATERIALS: Wood, saw, screws, screwdriver, automobile spring, strap metal.

APPROXIMATE COST: $1.00 each.



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Note: All planks are 2"x8"x96"

PURPOSE: Develop and improve static balance, dynamic balance, and general coordination.

POSSIBLE ACTIVITIES:

- Perform Basic Body Balances (p. 6), Balance in Motion Activities (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), and Balance Beam Activities (p.11).
- Walk (run, jump, hop, skip, crawl, creep) from one end to the other (forward, backward, sideward).
- Have one (two, more) person(s) on each end perform various balance activities (change positions).
- Dribble a ball (jump rope, play catch, hold weighted objects) while moving from one end to the other.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Decrease length of board for greater difficulty, especially with two or more participants.
- Decrease size of base for greater difficulty.
- Draw (paint, use contact paper) footprints and/or handprints on board to aid beginners.
- Perform activities with eyes open, then repeat with them closed.

SAFETY CONSIDERATIONS:

- Provide spotting as necessary.
- Place on mats, grass, or other soft surface.

SAFETY CONSIDERATIONS: (continued)

- Store in safe place when not in use.

MATERIALS: wood plank, log and split log, saw, 2"x2", paint, brush, screws, screwdriver.

APPROXIMATE COST: $3.00 each

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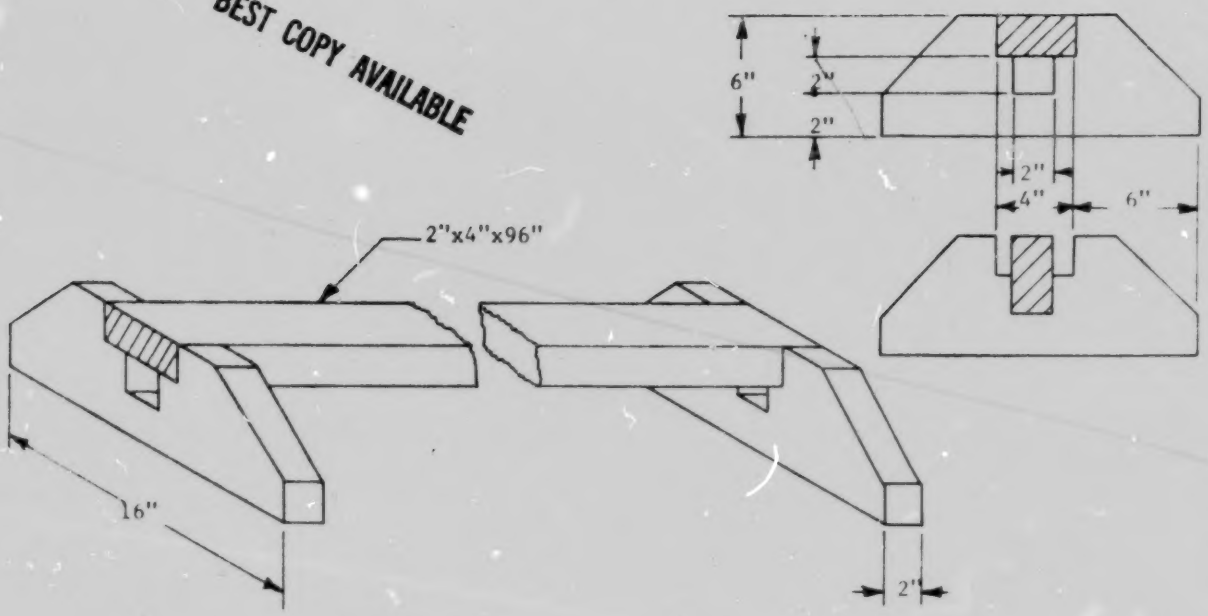

PURPOSE: Develop and improve static and/or dynamic balance and general, eye-hand, and eye-foot coordination.

POSSIBLE ACTIVITIES:

- Perform Basic Body Balances (p. 6), Balance in Motion Activities (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), Balance Beam Activities (p.11).
- Walk (hop, run, skip, crawl, creep) from one end to the other (forward, backward, sideward).
- Hop from one foot to the other (in place, along beam).
- Have two (more) people change ends (places) without stepping off.
- Have two (more) people play catch with ball (frisbee, bean bag).
- Jump rope (hoop, bicycle tire).
- Hop (jump, crawl, creep, step) over bean (forward, backward, sideward).
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Combine several beams into patterns or courses (straight, W, V, N, M, L).
- Place a block under one end to provide an inclined board.

HELPFUL HINTS: (continued)

- o Use longer (shorter) beams.
- o Make graduated or tapered beams where width gradually decreases.
- o Perform activities with eyes open, then repeat with them closed.

SAFETY CONSIDERATIONS:

- o Add supports to increase stability.
- o Provide spotting as necessary.
- o Place on mats, grass, or other soft surface.

MATERIALS: Wood, saw.

APPROXIMATE COST: $3.00

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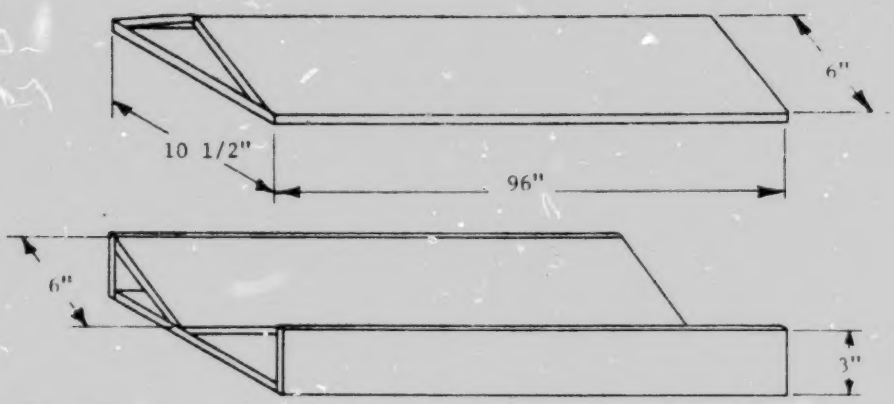

NOTE: All Wood is 1" thick.

PURPOSE: Develop and improve static and/or dynamic balance and general, eye-hand, and eye-foot coordination.

POSSIBLE ACTIVITIES:

- Perform And Away We Go Progression (p. 9), Balance Beam Activities (p.11).
- Walk (crawl, creep, run, jump, hop) across (forward, backward, sideward).
- Walk and bounce (catch, throw, switch an object from hand to hand) a (ball, bean bag, sponge, eraser, bleach bottle).
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Place one beam inside other to form a level balance beam.
- Perform activities with eyes open, then repeat with them closed.
- Draw (paint, use contact paper) footprints and/or handprints on board to aid beginners.

SAFETY CONSIDERATIONS:

- Provide spotting as necessary.
- Place on mats, grass, or other soft surface.
- Store in safe place when not in use.

MATERIALS: Wood, saw, nails, hammer.

ESTIMATED COST: $5.00

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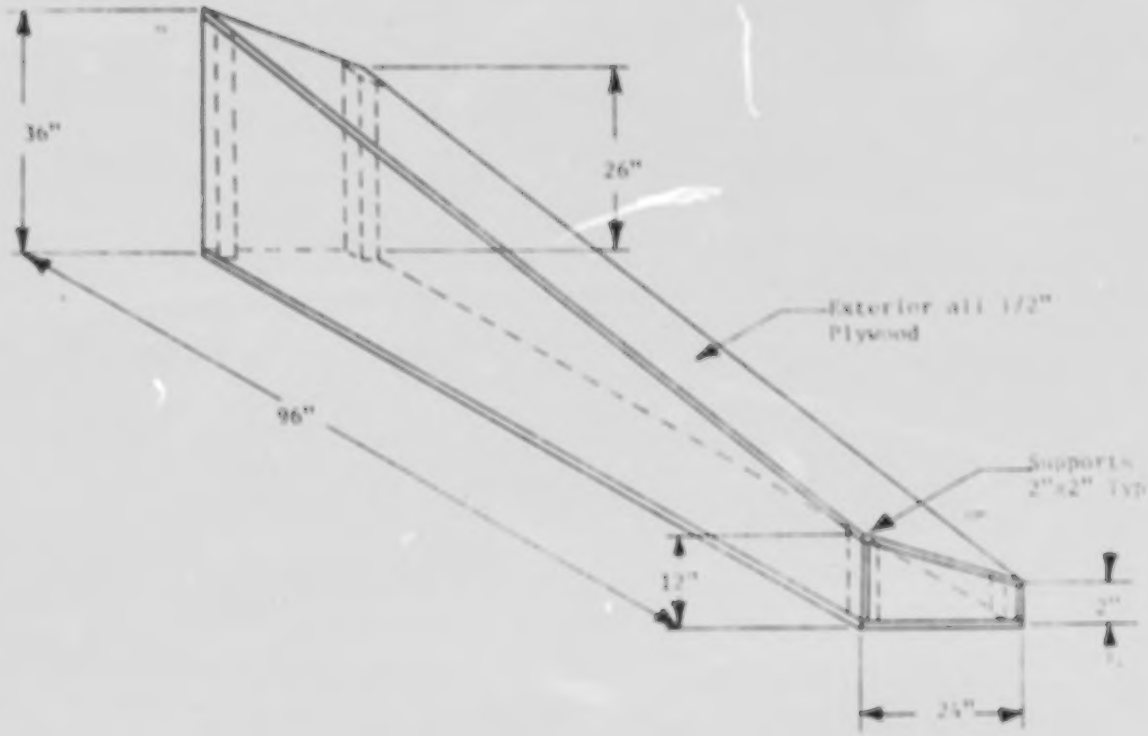

Develop and improve static and/or dynamic balance.

- Sit (kneel, squat on hands and knees) in various positions with (without) assistance.
- Crawl (creep, walk, run, hop, jump) up (down, across, over).
- Roll a ball up (down, across).
- Perform Basic Body Balances (p. 6), Balance in Motion (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), Balance Beam Activities (p.11).
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

- Turn ramp upside down to change slant from right to left.
- Incorporate platform at end of ramp for jumping activities.

HELPFUL HINTS: (continued)

- Include straight as well as slant ramps for activities.
- Perform activities with eyes open, then repeat with them closed.
- Draw (paint, use contact paper) footprints and/or handprints on board to aid beginners.

SAFETY CONSIDERATIONS:

- Cover ramp with rubber matting to prevent slippage and to change input sensory stimulation.

MATERIALS: Wood, nails, hammer, saw, rubber matting.

APPROXIMATE COST: $10.00

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Note: Set bottom of tires in concrete then cover with at least 2" of dirt (sand, sawdust)

PURPOSE: Develop and improve static and/or dynamic balance and agility.

POSSIBLE ACTIVITIES:

- Perform various Balance Board Activities (p.10) on a single tire.
- Crawl through one tire and over next.
- Leap frog over each tire; leap frog over one and crawl through next.
- Walk (run, hop, jump, crawl, hurdle) across (over, through, in and out).
- Use a single tire for vaulting activities (straddle, squat, flank).
- Include as a part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Arrange tires to suit needs (straightline, S, Figure 8, circle).
- Use as many or as few tires as needed.
- Use different size tires (truck, regular, compact) according to abilities of participants.
- Mount tires on wooden plank.

SAFETY CONSIDERATIONS:

- Start slowly and use spotting as necessary.

MATERIALS: Old tires, concrete.

APPROXIMATE COST: $10.00

SINKING TIRES

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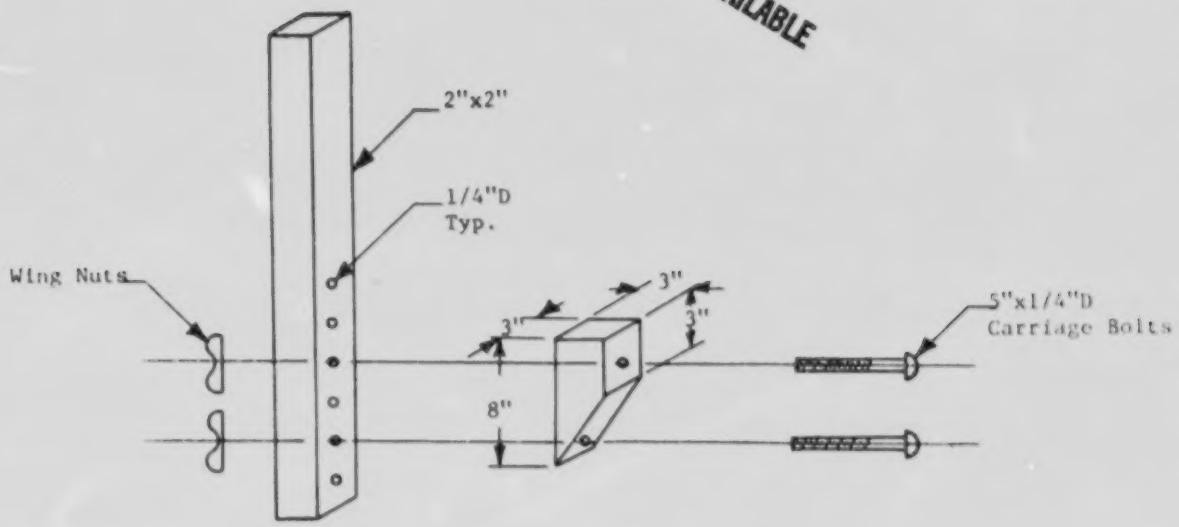

PURPOSE: Develop and improve general coordination and dynamic balance.

POSSIBLE ACTIVITIES:

- Walk (run, jump, hop) forward (backward, sideward) in various patterns (circle, square, triangle, figure eight, uphill, downhill, giant/baby steps, fast/slow).
- Introduce relays, contests, games, self-testing activities, combatives.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Tape stilts to provide hand grips.
- Substitute puddle jumpers (tin cans and ropes) for wooden stilts.

SAFETY CONSIDERATIONS:

- Progress from easy to difficult (low to high, slow to fast, simple to complex).
- Provide spotting as necessary.

MATERIALS: Wood, carriage bolts, wing nuts, saw, drill.

APPROXIMATE COST: $4.00 per pair

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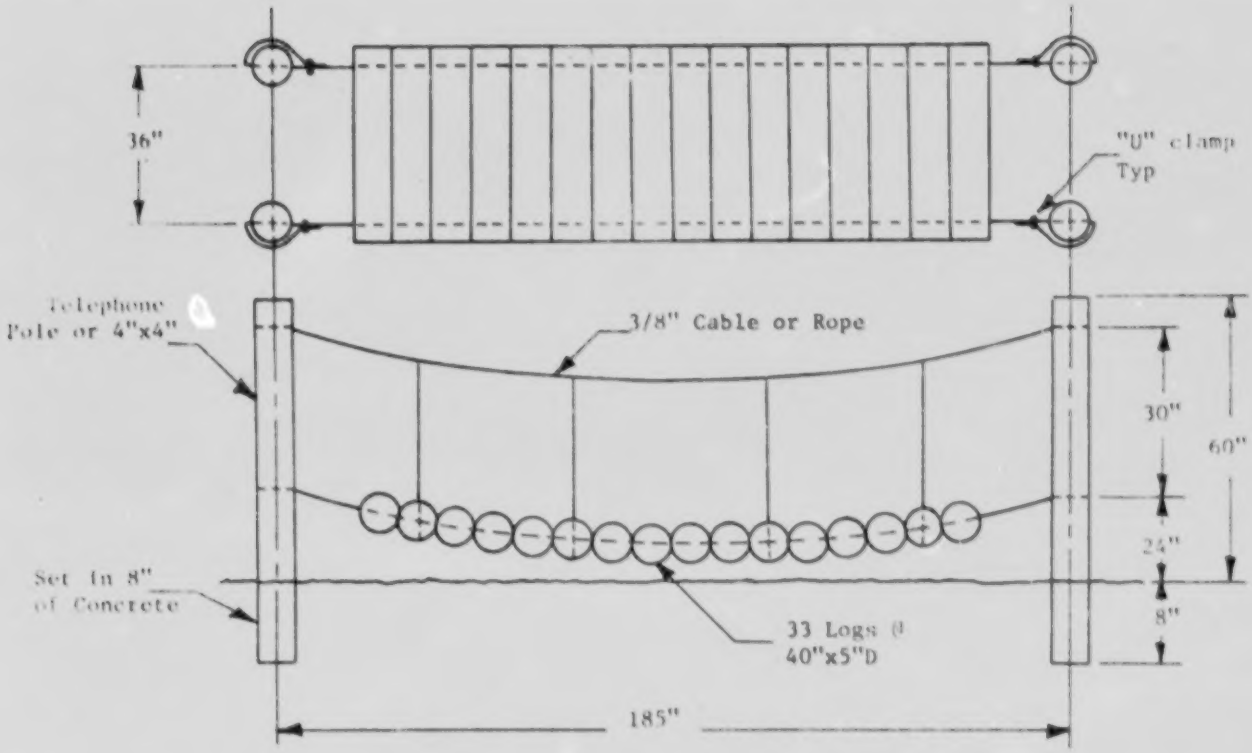

SWINGING BRIDGE

PURPOSE: Develop and improve static and/or dynamic balance.

POSSIBLE ACTIVITIES:

- Perform Basic Body Balances (p. 6), Balance In Motion (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), and Balance Beam Activities (p.11).
- Walk (run, crawl, creep, hop, skip) forward (backward, sideward) across (under) bridge.
- Play ball over (volleyball, badminton).
- Place balance board or balance beam on bridge to increase difficulty and challenge.
- Include on confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Perform activities with eyes open, then repeat with them closed.

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SAFETY CONSIDERATIONS:

- o Keep bridge close to ground.
- o Make certain connections are tight.
- o Provide spotting as necessary.

MATERIALS: Telephone poles (4"x4"), rope or cable, concrete, drill, logs, cable clamps.

APPROXIMATE COST: $25.00

CONSTRUCTION HINTS: Drill logs and supports, then thread cable through; overlap back and clamp tightly (see drawing).

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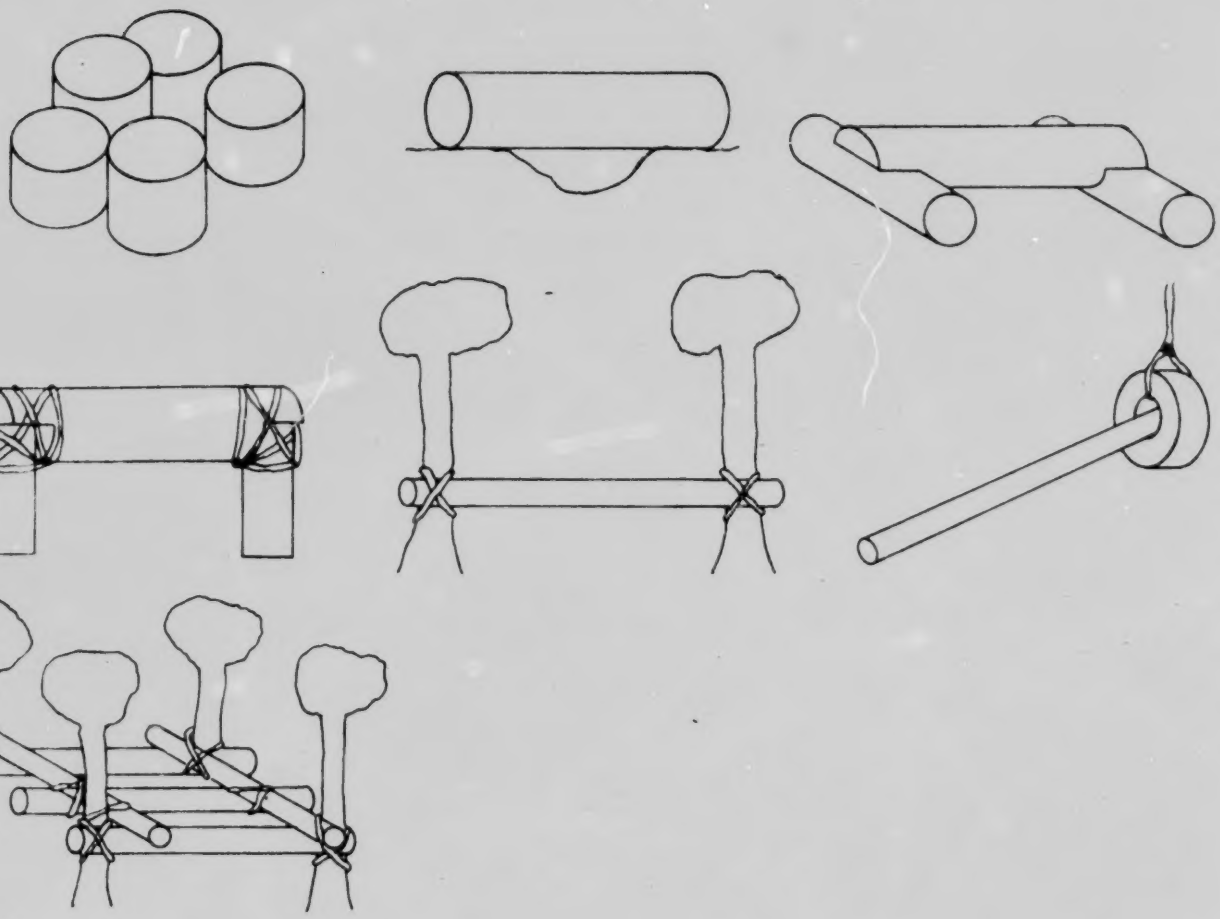

PURPOSE: Develop and improve static and/or dynamic balance and agility.

POSSIBLE ACTIVITIES:

- Perform Basic Body Balances (p. 6), Balance In Motion (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), Balance Beam Activities (p.11).
- Step (hop, jump, crawl, creep, climb, vault, handwalk, swing) from one log to another (across, over, under, through).
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Tie or nail logs in place.
- Perform activities with eyes open, then repeat with them closed.

LOGS

SAFETY CONSIDERATIONS:

- Make certain logs are secure before using.
- Provide spotting as necessary.

MATERIALS: Logs, tire, rope, poles, nails, hammer.

APPROXIMATE COST: $5.00 (for rope)

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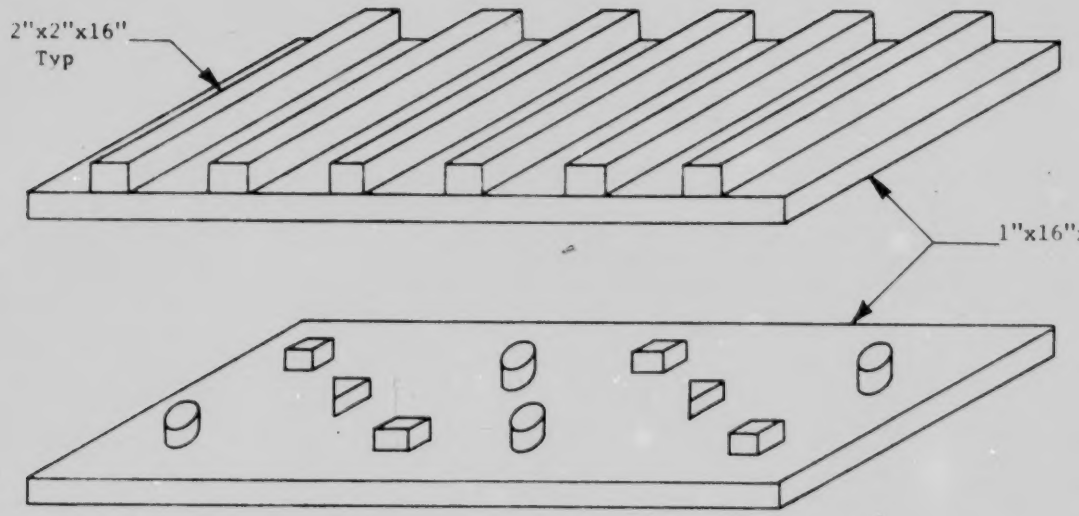

WALKING/CLIMBING BOARD

PURPOSE: Develop and improve static and/or dynamic balance, general coordination, agility, and figure-ground discrimination.

POSSIBLE ACTIVITIES:

- Perform Basic Body Balances (p. 6), Balance In Motion (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), Balance Beam Activities (p.11).
- Walk (run, hop, jump, crawl) across forward (backward, sideward) on top (between).
- Perform combative activities where an individual uses one board and another uses a second board.
- Use for relays and other contests.
- Include as part of confidence (obstacle) course.
- Turn over and use as a flat ramp.
- Attach in vertical position and climb up (down, across).
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Vary heights of raised portions to encourage up and down action.
- Move from horizontal to vertical by degrees.
- Use different shapes (colors, numbers, letters, other figures).

SAFETY CONSIDERATIONS:

- o Fasten raised portions securely.
- o Provide spotting as necessary.

MATERIALS: Wood, saw, nails, hammer.

APPROXIMATE COST: $5.00

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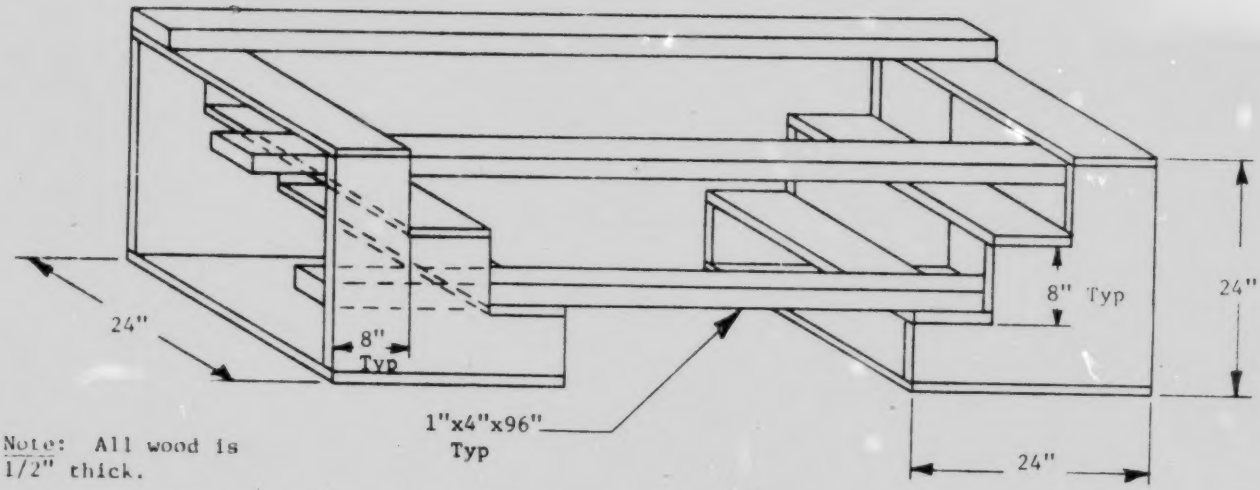

Note: All wood is 1/2" thick.

PURPOSE: Develop and improve static and/or dynamic balance, general coordination, and locomotor skills.

POSSIBLE ACTIVITIES:

- Creep (crawl, walk, run, hop, skip, jump) forward (backward, sideward) up (down, across, over, under, through).
- Perform Basic Body Balances (p. 6), Balance In Motion Activities (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), Balance Beam Activities (p.11) on planks at different heights.
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Construct different sizes and heights according to needs and abilities of participants.
- Incline cross planks to add variety.
- Use variety of arrangements of cross planks.
- Use stairs on side or end.
- Perform activities with eyes open, then repeat with them closed.
- Draw (paint, use contact paper) footprints and/or handprints on board to aid beginners.

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SAFETY CONSIDERATIONS:

- o Provide spotting as necessary.
- o Place on mats, grass, or other soft surface.

MATERIALS: Wood, saw, nails, hammer.

APPROXIMATE COST: $5.00 per stairs

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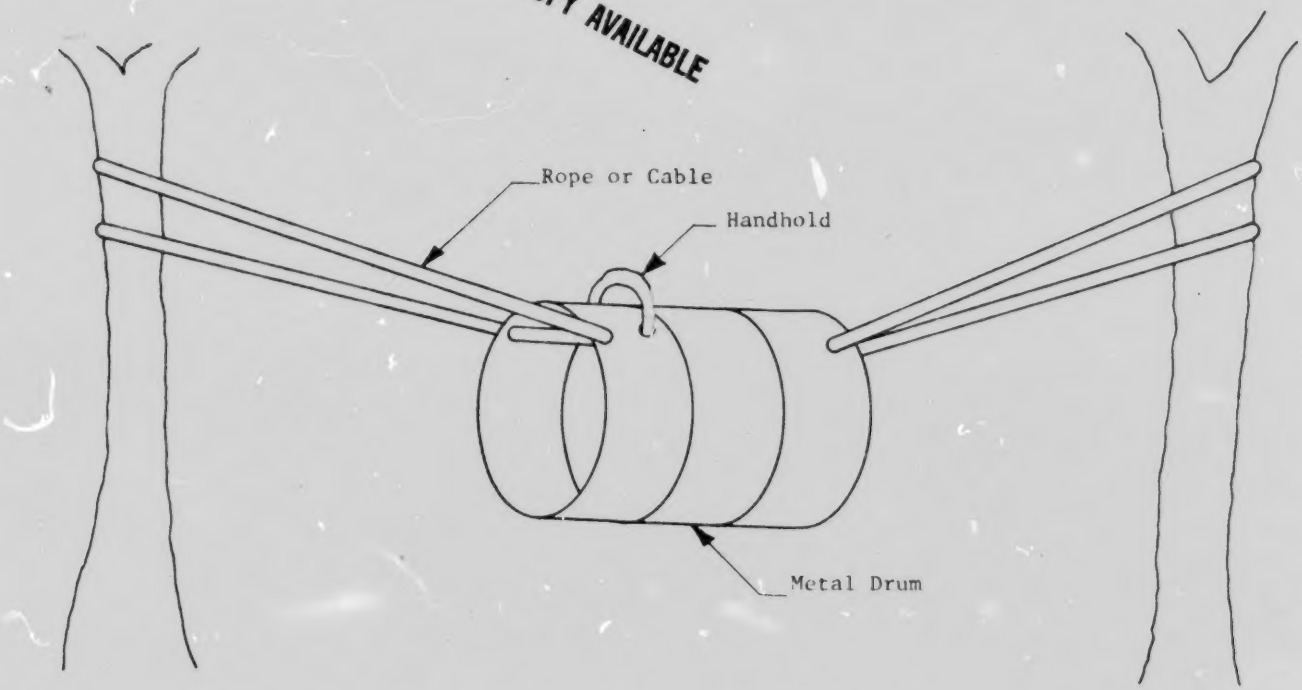

PURPOSE: Develop and improve dynamic balance.

POSSIBLE ACTIVITIES:

- Ride (drape over) barrel (pull on ropes to create various bucking movements).
- Play racquet or ball games over barrel (volleyball, badminton, paddle tennis, frisbee, bean bag activities, ball games).
- Use different sections of drum as targets for various rolling (tossing, throwing) games.
- Crawl over (under, through) barrel.
- Place over small swimming or wading pool.
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Rotate participants to provide equal opportunities for each.

SAFETY CONSIDERATIONS:

- Place over mats, grass, on other soft surface.
- Consider ability of each participant when determining extent of bucking and distance of broncho from the ground.

BUCKIN BRONCHO

SAFETY CONSIDERATIONS: (continued)

- o File all rough edges after cutting out ends of drum and/or cover with protective covering.
- o Provide spotting as necessary.

MATERIALS: Barrel, rope, drill, hacksaw.

APPROXIMATE COST: $5.00

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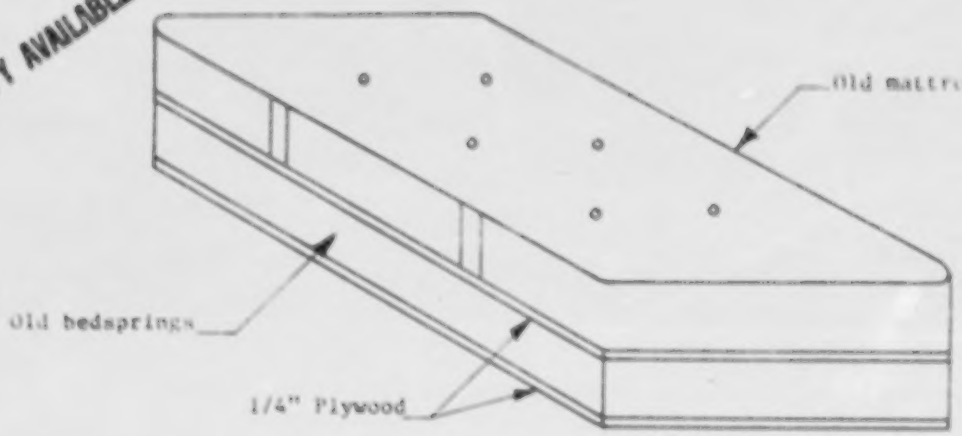

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Develop and improve static and/or dynamic balance, general coordination, and jumping skills.

ACTIVITIES:

- Use for fundamental jumping (tumbling, turning, bouncing) activities.
- Perform Basic Body Balances (p. 6), Balance In Motion (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), Balance Beam Activities (p.11).
- Introduce basic trampoline movements, patterns, and activities.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Use a durable, non-slip, removable cover such as burlap.
- Have one person wiggle device while another wobbles on it.
- Draw (paint, use contact paper) footprints and/or handprints on mattress to aid beginners.

SAFETY CONSIDERATIONS:

- Stay in middle of apparatus.
- Provide spotting as necessary.

MATERIALS: Old bedsprings, mattress, plywood.

APPROXIMATE COST: $10.00

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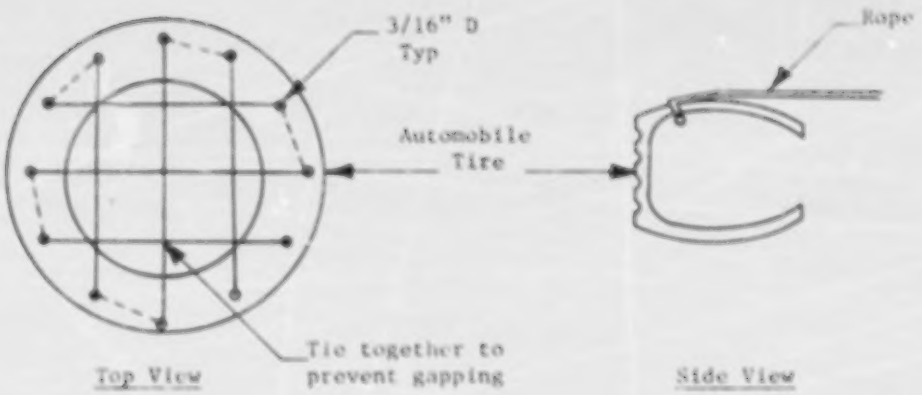

PURPOSE: Develop and improve static balance, general coordination, jumping and throwing skills.

POSSIBLE ACTIVITIES:

- Introduce fundamental jumping (hopping, bouncing, turning, vaulting) movements, patterns, and skills.
- Perform Basic Body Balances (p. 6), Stork Stand Series (p. 8), Balance Board Activities (p.10).
- Set up and use target for throwing skills (pitch back).
- Devise own activities, combinations, and routines.

SET-UP:

- Place (paint) target on canvas for throwing skills and to indicate safe jumping area.
- Perform activities with eyes open, then repeat with them closed.

SAFETY CONSIDERATIONS:

- Stay in middle because of small bouncing area.
- Provide spotting as necessary.

MATERIALS: Discarded automobile tire and tube, clothes line, drill, canvas.

APPROXIMATE COST: $5.00

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CONSTRUCTION HINTS:

- Stretch canvas over tire and fasten securely through holes.
- Insert tube into tire and inflate after weaving the rope.

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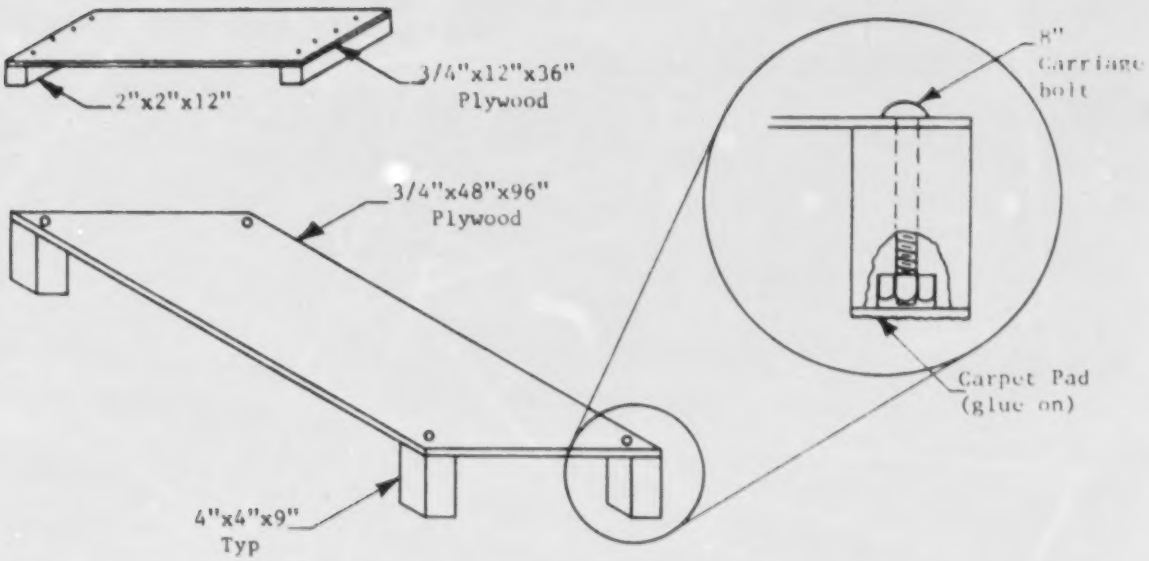

PURPOSE: Develop and improve static and/or dynamic balance, general coordination, and jumping skills.

POSSIBLE ACTIVITIES:

- Perform fundamental jumping (hopping, bouncing, turning) movements, patterns, and skills.
- Perform Basic Body Balances (p. 6), Balance In Motion Activities (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), and Balance Beam Activities (p.11).
- Devise own activities, combinations, and routines.

SAFETY CONSIDERATIONS:

- Stay in middle because of small bouncing area.
- Draw (paint, use contact paper) footprints and/or handprints on board to aid beginners.
- Provide spotting as necessary.

MATERIALS: Plywood, carriage bolts and nuts, carpet pads, saw, wrench, glue.

APPROXIMATE COST: $10.00

SPRING BED

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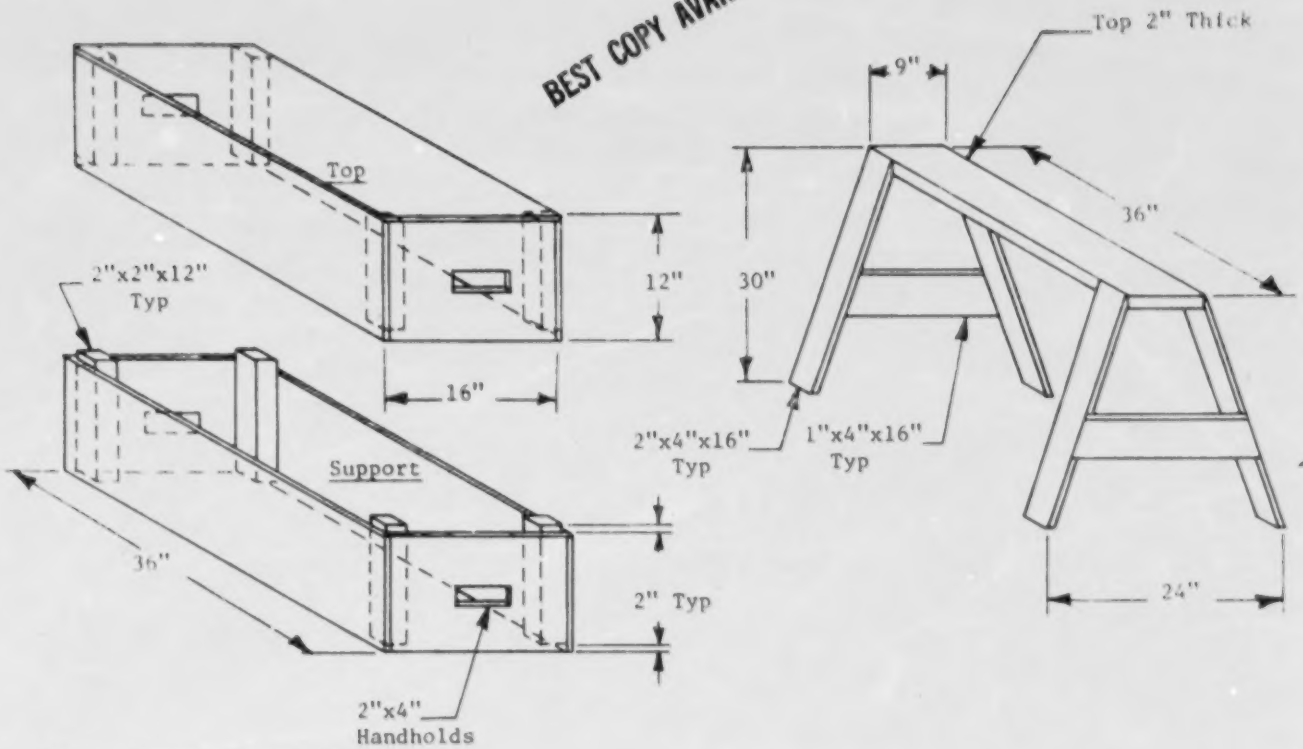

Note: Construct one top piece and four support pieces from 1/2" thick lumber.

PURPOSE: Develop and improve static and/or dynamic balance, general coordination and agility.

POSSIBLE ACTIVITIES:

- Climb (vault) over or crawl (creep) under.
- Perform Basic Body Balances (p. 6), Balance In Motion Activities (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), Balance Beam Activities (p.11).
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Use planks from one to the other or to the floor for added variations.
- Provide spotting as necessary.

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HELPFUL HINTS: (continued)

- Draw (paint, use contact paper) footprints and/or handprints on box to aid beginners.
- Perform activities with eyes open, then repeat with them closed.
- Place mats over top of horse for vaulting.

SAFETY CONSIDERATIONS:

- Place boxes firmly in place before using.
- Place on mats, grass, or other soft surface.
- Provide spotting as necessary.
- Increase height of box as ability increases.

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MATERIALS: Wood, saw, nails, hammer.

APPROXIMATE COST: $10.00

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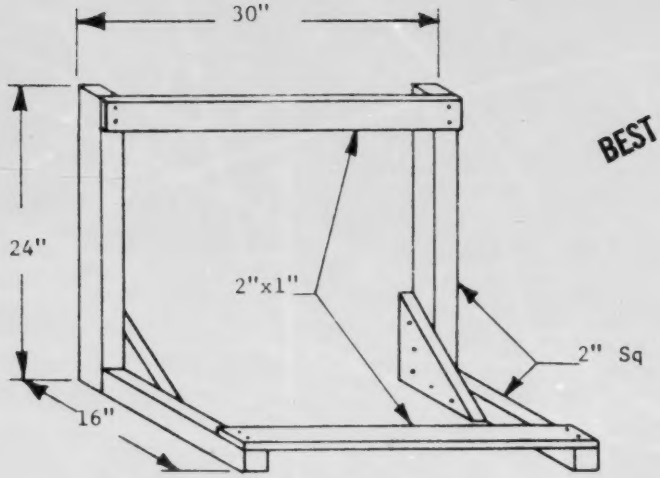

PURPOSE: Develop and improve general coordination, jumping skills, and hurdling ability.

POSSIBLE ACTIVITIES:

- Jump (hop, hurdle) over; crawl under; run around; set in line and go over and under in various combinations and with different signals (visual, verbal, combinations).
- Include as part of confidence (obstacle) course or in relay games.

HELPFUL HINTS:

- Vary dimensions according to needs and abilities of each participant--12 to 18 inch hurdles are great for young children!
- Substitute cardboard or wooden boxes, broom sticks or wooden dowels on tin cans, bricks, cinder blocks, or wooden supports for hurdles.

SAFETY CONSIDERATIONS:

- Keep depth of base short to allow hurdle to tip if participant catches foot, knee, or leg on way over.
- Provide spotting as necessary.

MATERIALS: Wood, saw, nails, hammer.

APPROXIMATE COST: $11.00

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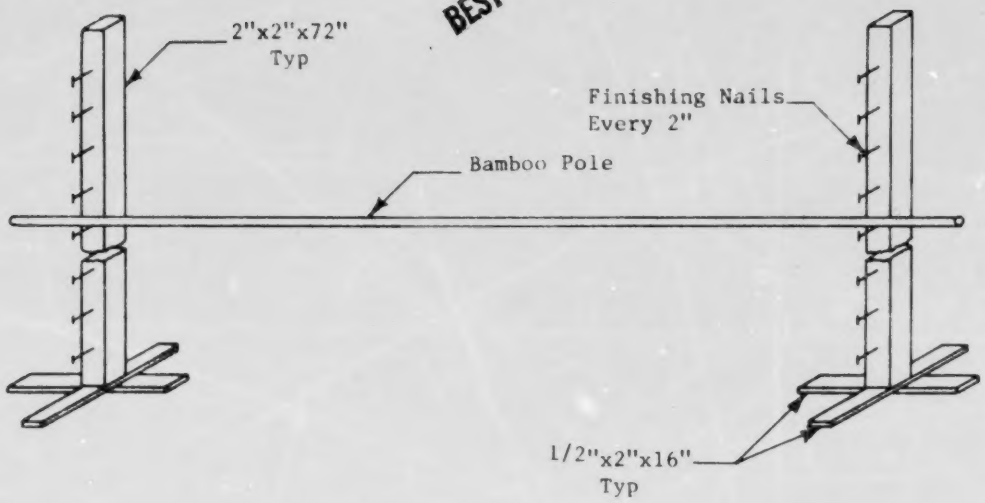

PURPOSE: Develop and improve general coordination, agility and jumping skills.

POSSIBLE ACTIVITIES:

- Crawl (creep) under; use for limbo games; run around.
- Use for standing (running) high jump (pole vault) activities.
- Include as part of confidence (obstacle) course.

SAFETY CONSIDERATIONS:

- Jump from side opposite nails.
- Provide a soft landing area (crash mat, sawdust, sand, foam rubber).
- Substitute wooden pegs or small dowels for nails.
- Provide spotting as necessary.

MATERIALS: Wood, saw, nails, hammer, bamboo pole.

APPROXIMATE COST: $5.00

CONSTRUCTION HINTS: Attach base by nailing or screwing from bottom into end of 2"x2".

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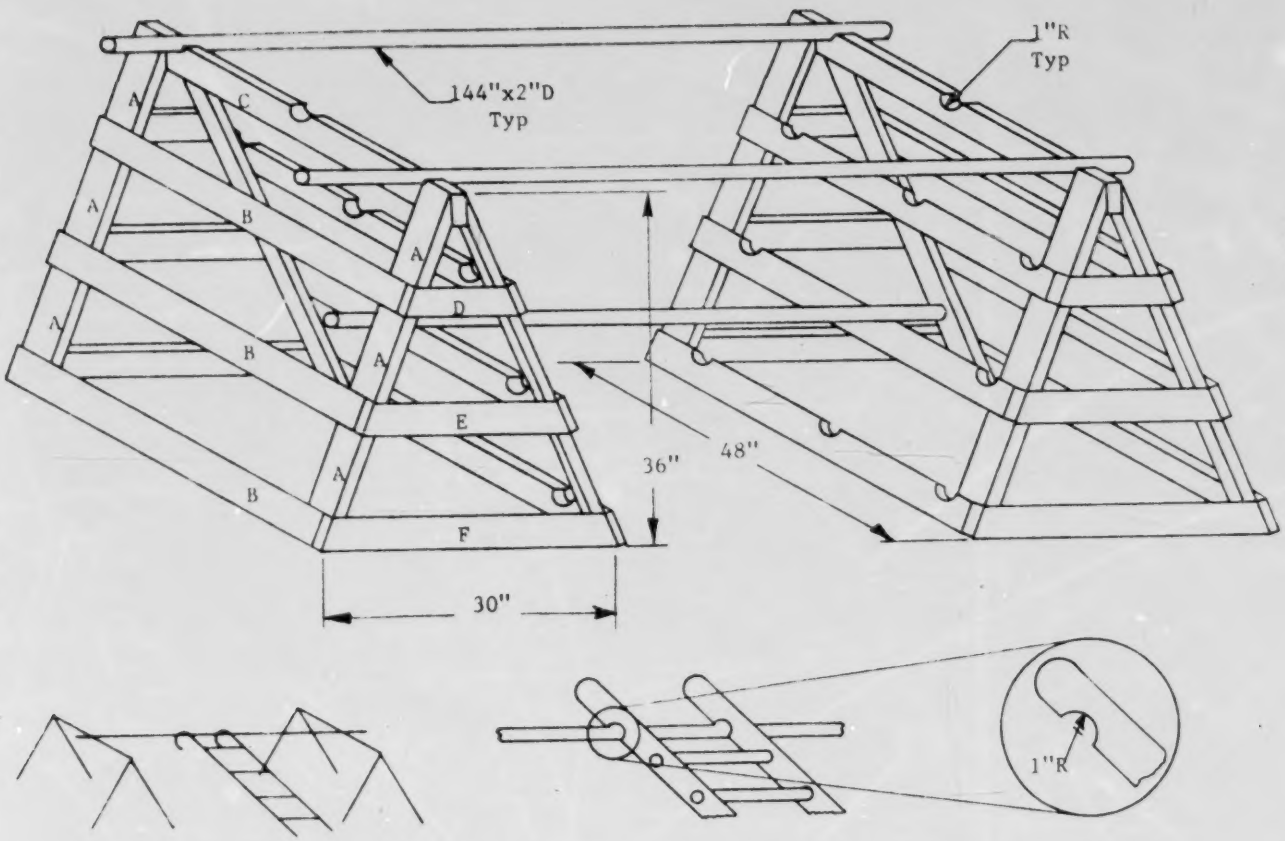

A - 8 @ 2"x4"x39"
B -12 @ 1"x4"x48"
C - 2 @ 2"x4"x48"
D - 4 @ 1"x4"x11"
E - 4 @ 1"x4"x18"
F - 4 @ 1"x4"x30"

PURPOSE: Develop and improve muscular strength and endurance, static and/or dynamic balance, and agility.

POSSIBLE ACTIVITIES:

- Use for movement exploration and other problem solving activities.
- Climb (jump, hop, vault) over; crawl (creep) under; perform over--under patterns.
- Perform Basic Body Balances (p. 6), Balance In Motion Activities (p. 7), Stork Stand Series (p. 8), And Away We Go Progression (p. 9), Balance Board Activities (p.10), Balance Beam Activities (p.11).
- Use for parallel bars.
- Include as part of confidence (obstacle) course.

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POSSIBLE ACTIVITIES: (continued)

- o Devise own activities, combinations, and routines.

HELPFUL HINTS:

- o Incline cross poles for variation.
- o Cover with tumbling mat for vaulting activities.
- o Replace ladder with a plank or use both.

SAFETY CONSIDERATIONS:

- o Secure all parts firmly before using.
- o Place on mats, grass, or other soft surface.
- o Provide spotting as necessary.

MATERIALS: Wood, saw, nails, ladder (wood or aluminum), poles.

APPROXIMATE COST: $25.00

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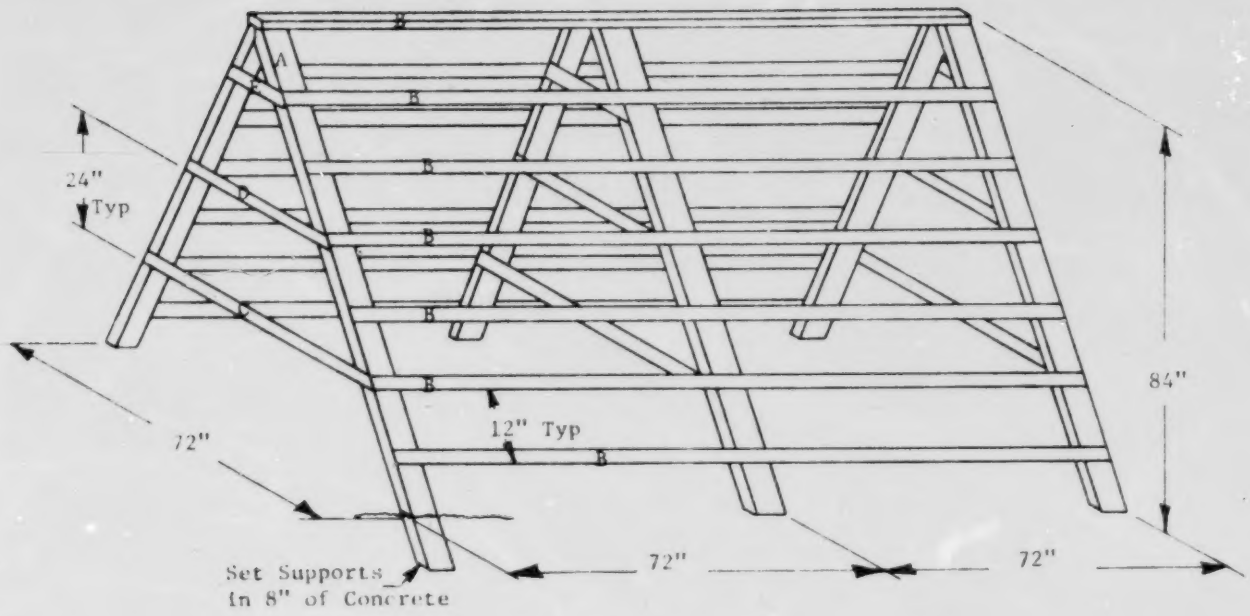

A - 6 @ 2"x4"x92"
B - 13 @ 2"x2"x144"
C - 3 @ 2"x2"x54"
D - 3 @ 2"x2"x36"
E - 3 @ 2"x2"x12"

CLIMBING TOWER

PURPOSE: Develop and improve muscular strength and endurance, and general coordination.

POSSIBLE ACTIVITIES:

- Climb up (down, across, over); crawl (creep) under (through, in and out).
- Use for ball (racquet, bean bag, quoit, frisbee) games and activities over top, movement exploration, and other problem solving activities.
- Use in relays, contests, self-testing activities, and low organized games.
- Use as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Use logs instead of finished wood, especially in camps and rural settings.
- Encourage participants to climb one board/step higher each time until straddling at top when it is just as easy to continue over as to come down side climbed.

HELPFUL HINTS: (continued)

- o Vary distances between succeeding boards/steps.
- o Construct different heights for participants of varying abilities.

SAFETY CONSIDERATIONS:

- o Place on sawdust, grass, or on other soft surface.
- o Check constantly for loose supports or nails.
- o Provide spotting as necessary.

MATERIALS: Wood, saw, nails, hammer, concrete.

APPROXIMATE COST: $50.00

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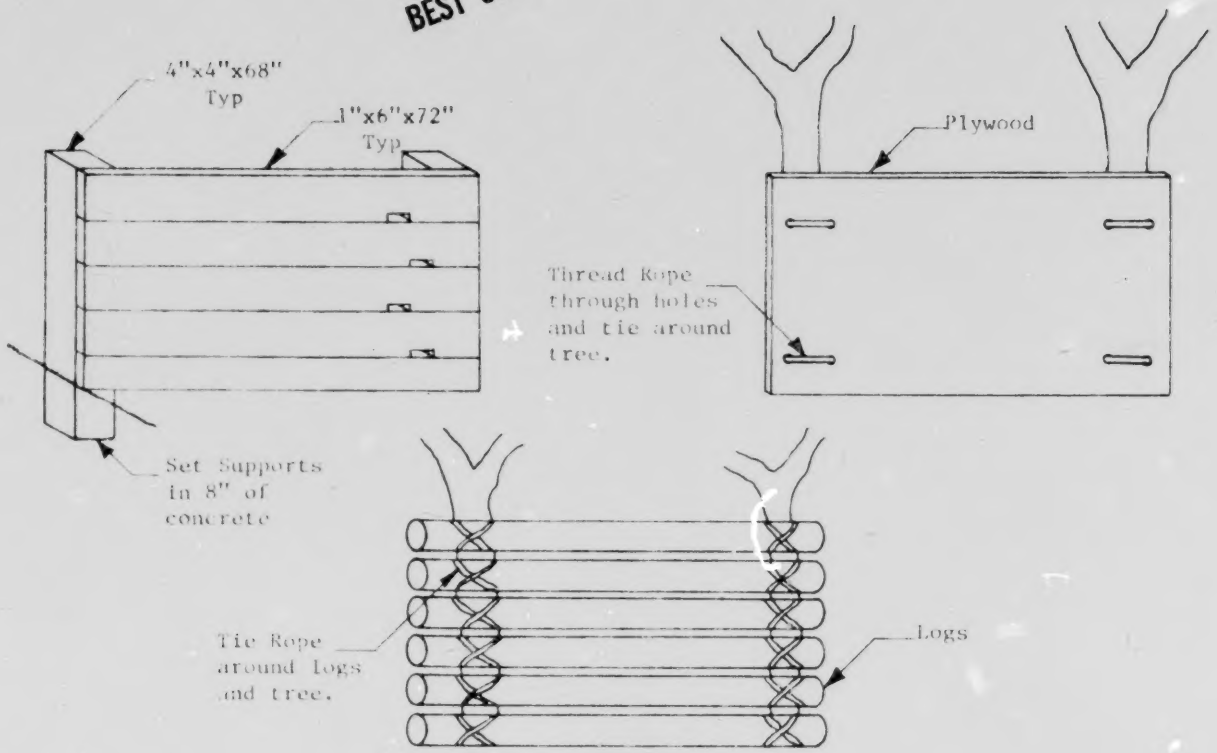

OBJECTIVE: Develop and improve muscular strength, and endurance, general coordination, and agility.

POSSIBLE ACTIVITIES:

- Climb (vault) over; run around.
- Use for game activities where object (ball, bean bag, frisbee, quoit, badminton bird) are seen and reacted to without seeing other players.
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Provide hand (foot) holds to aid beginners.
- Encourage participants to assist each other by extending hand from top or taking position on hands and knees to serve as a step.
- Use box as step.
- Construct different heights for participants of varying abilities.

CLIMBING WALL

SAFETY CONSIDERATIONS:

- Check constantly for loose boards (nails, logs).

MATERIALS: Wood, saw, nails, hammer, rope, drill, concrete.

APPROXIMATE COST: $5.00

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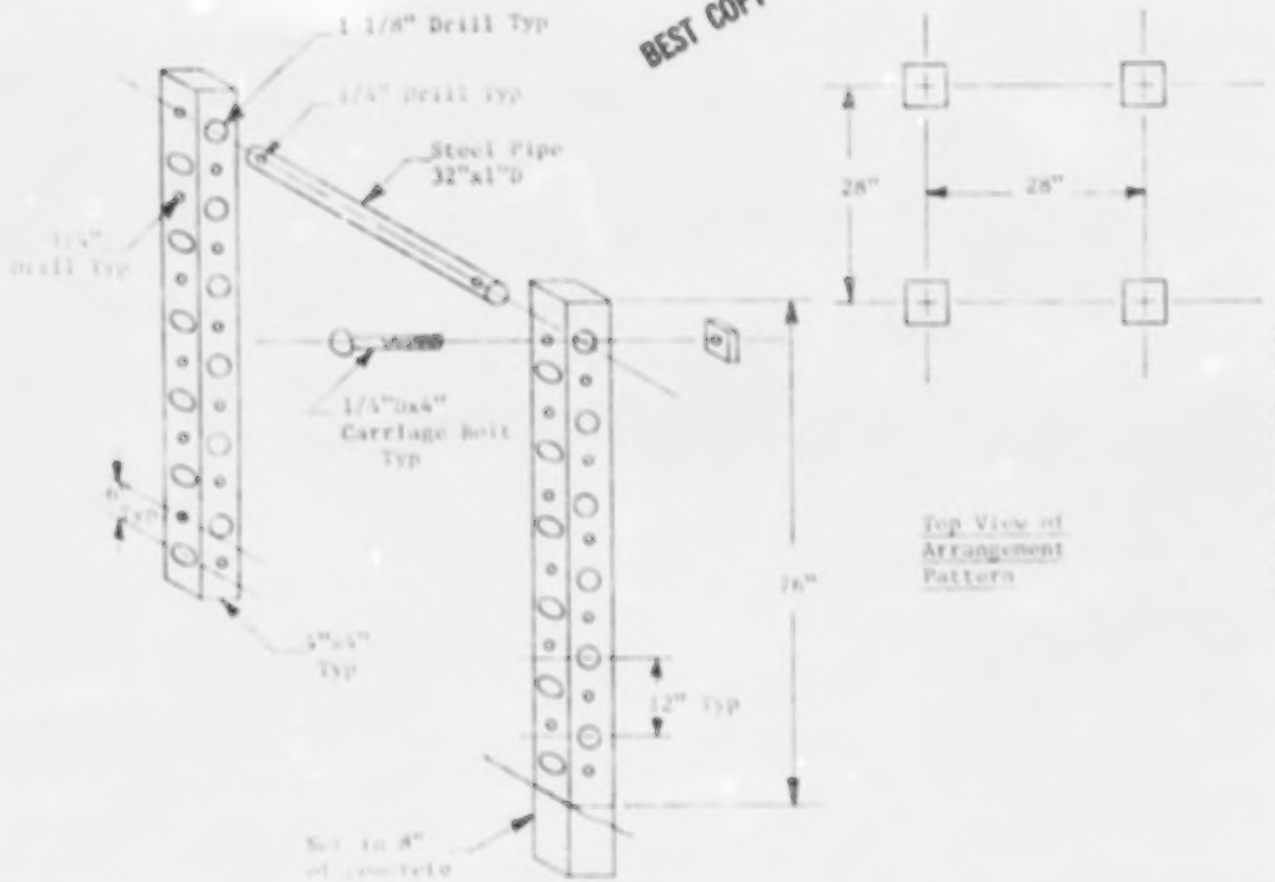


ADJUSTABLE TURKEY BARS

PURPOSE: Develop and improve muscular strength and endurance, general coordination, and agility.

POSSIBLE ACTIVITIES:

- Use as an adjustable isometric station.
- Climb up (down, over, under, through).
- Use as horizontal bar for pull-ups (straight arm hang, flexed arm hang, isometric activities).
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Use any number of crossbars to devise different arrangements (top bar only for pull-ups, bottom bar only for crawling under, all bars for climbing).

HELPFUL HINTS: (continued)

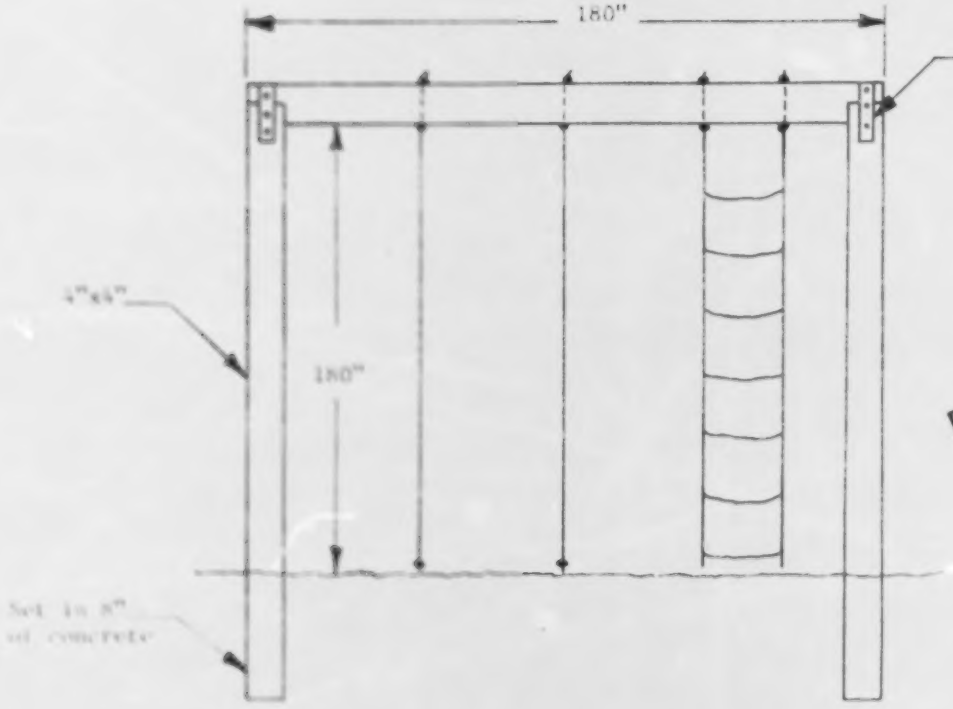
- Have bars of different heights for participants of varying abilities.

SAFETY CONSIDERATIONS:

- Make certain all crossbars are secure before allowing use.
- Inset nuts into uprights.
- Provide spotting as necessary.

MATERIALS: Steel pipe, beams, bolts and nuts, concrete, drill.

APPROXIMATE COST: $25.00 and up (depends on number of uprights).



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ROPE CLIMBER

PURPOSE: Develop and improve upper body muscular strength and endurance, and general coordination.

POSSIBLE ACTIVITIES:

- Climb (swing, swing and drop off).
- Use as a goal for ball games and activities.
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Attach one rope at bottom to aid climbing by preventing swinging.
- Space ropes every 12" (18", 24") to aid in climbing.
- Use swing set standard as frame to attach ropes and ladder.
- Replace one rope with gymnastic rings and/or trapezee bar.

SAFETY CONSIDERATIONS:

- Place on sawdust, grass, or on other soft surface.

SAFETY CONSIDERATIONS: (continued)

- Stress hand-under-hand descent, not sliding, to prevent rope burns.
- Keep area clear while apparatus is in use.
- Provide spotting as necessary.

MATERIALS: 4"x4", strap metal, large nails, hammer, concrete, rope, drill.

APPROXIMATE COST: $25.00

CONSTRUCTION HINTS:

- Drill holes in top support, thread rope through, and knot on both sides.
- Drive spikes down from top to secure crossbar in addition to metal strap across top.

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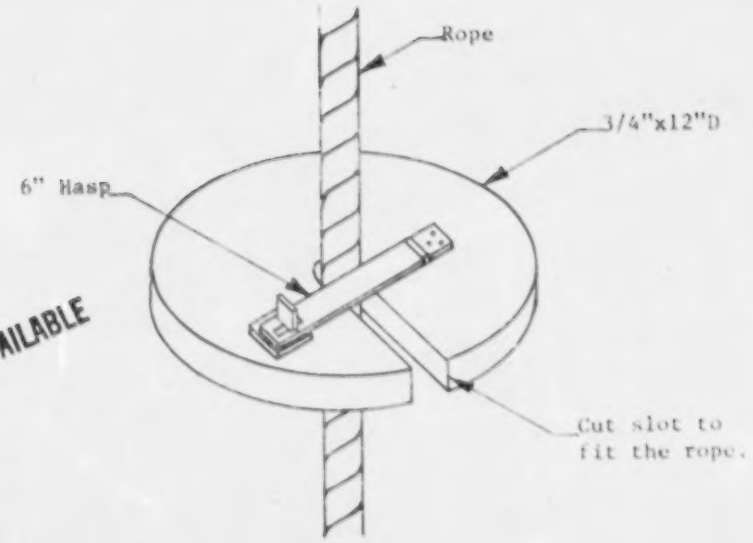

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PURPOSE: Assist in rope activities.

POSSIBLE ACTIVITIES:

- Use as foot hold to aid in climbing rope.
- Use as adjustable seat for rope swing.
- Establish upper limit or goal on rope to control climbing.

HELPFUL HINTS:

- Use chalk or charcoal on disc as a way of determining whether or not it has been touched.

SAFETY CONSIDERATIONS:

- Place hasp close enough to rope to prevent slippage.
- Tie knot directly under disc to prevent slippage.
- Position disc so hasp is opposite side being used.

MATERIALS: Wood, hasp, screws, screwdriver, saw.

APPROXIMATE COST: $1.00

ROPE DISC

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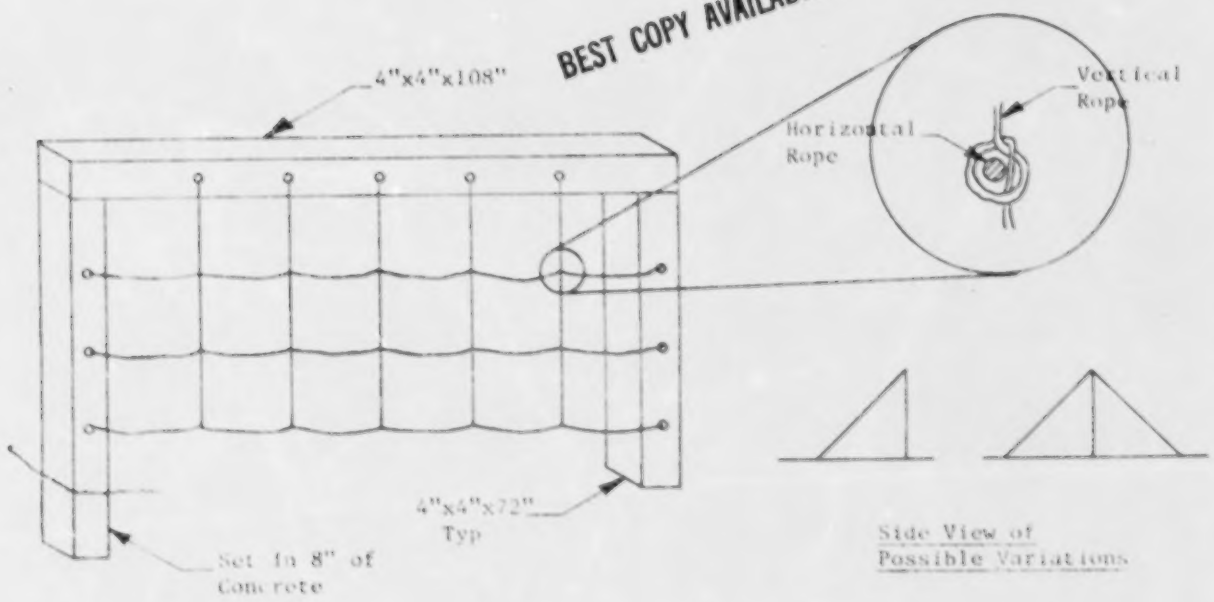

PURPOSE: Develop and improve muscular strength and endurance, general coordination, and agility.

POSSIBLE ACTIVITIES:

- Climb up (over, down, across, under, through).
- Use for relays, self-testing activities, and low organized games.
- Use as a goal for ball games and activities.
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Encourage participant to go one step higher until straddling top when it is just as easy to continue over as to come back down side climbed.

SAFETY CONSIDERATIONS:

- Place on sawdust, grass, or on other soft surface.
- Provide spotting as necessary.

MATERIALS: Wood, saw, nails, hammer, drill, rope or chain, concrete.

APPROXIMATE COST: $25.00

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CONSTRUCTION HINTS:

- o Attach horizontal ropes first.
- o Thread rope through holes and knot on both sides.
- o Use chain (rope, cargo net, automobile tires).
- o Construct different heights for participants of varying abilities.

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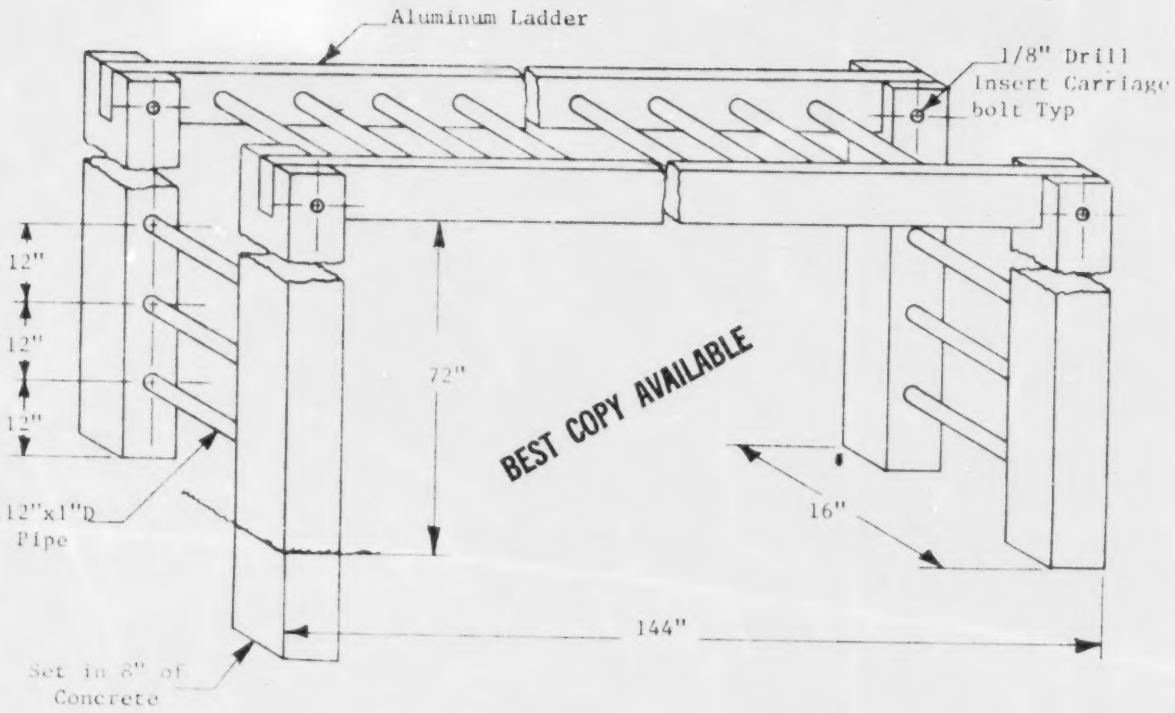

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PURPOSE: Develop and improve upper body muscular strength and endurance, and eye-hand coordination.

POSSIBLE ACTIVITIES:

- Hand-walk across (forward, backward, sideward) on middle rungs (side supports) in various combinations.
- Hang by arms and/or legs (determine who can hang longest time).
- Use for pull-ups (flexed arm hang, self-testing activities, stunts).
- Crawl (creep, walk) across top.
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

SAFETY CONSIDERATIONS:

- Place over sawdust, grass, or other soft surface.
- Inset nuts into uprights.
- Provide spotting as necessary.

MATERIALS: 4"x4", aluminum ladder, drill, carriage bolts, steel pipe, concrete.

APPROXIMATE COST: $35.00

CONSTRUCTION HINTS:

- Drill 1" diameter holes 2" deep and insert pipe for steps.
- Install upright steps before inserting supports into concrete.
- Attach ladder to supports with ropes for additional variations.

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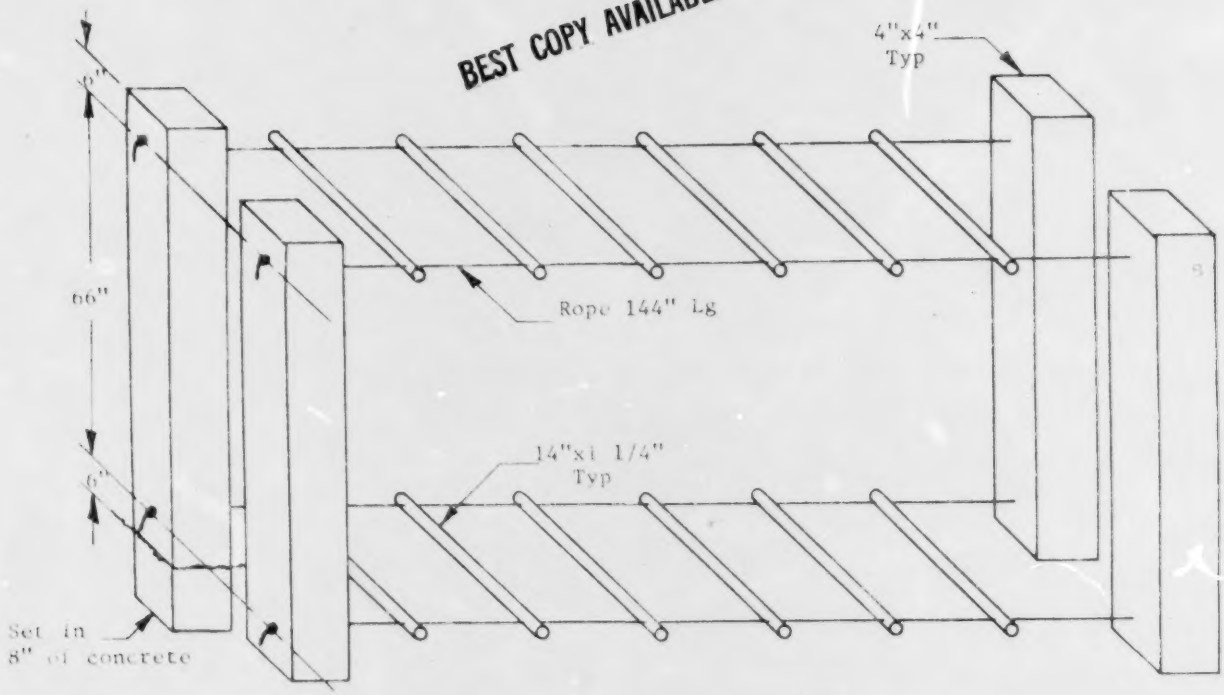

PURPOSE: Develop and improve upper body muscular strength and endurance, general, eye-foot, and eye-hand coordination, and dynamic balance.

POSSIBLE ACTIVITIES:

- Hand walk (crawl, creep, walk) across (forward, backward, sideward) in various combinations.
- Use for pull-ups (straight arm hang, flexed arm hand, self-testing activities stunts).
- Hang by arms and/or legs (determine who can hang longest time).
- Use as a goal for ball games and activities.
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Attach (remove) top or bottom to meet participants needs.
- Attach one end through top holes and other end through bottom holes.

SWINGING OVERHEAD LADDER

SAFETY CONSIDERATIONS:

- o Place over sawdust, grass or other soft surface.
- o Provide spotting as necessary.

MATERIALS: Wood beams, drill, concrete, rope ladder(s).

APPROXIMATE COST: $25.00

CONSTRUCTION HINTS: Drill, supports thread rope through and knot on both sides.

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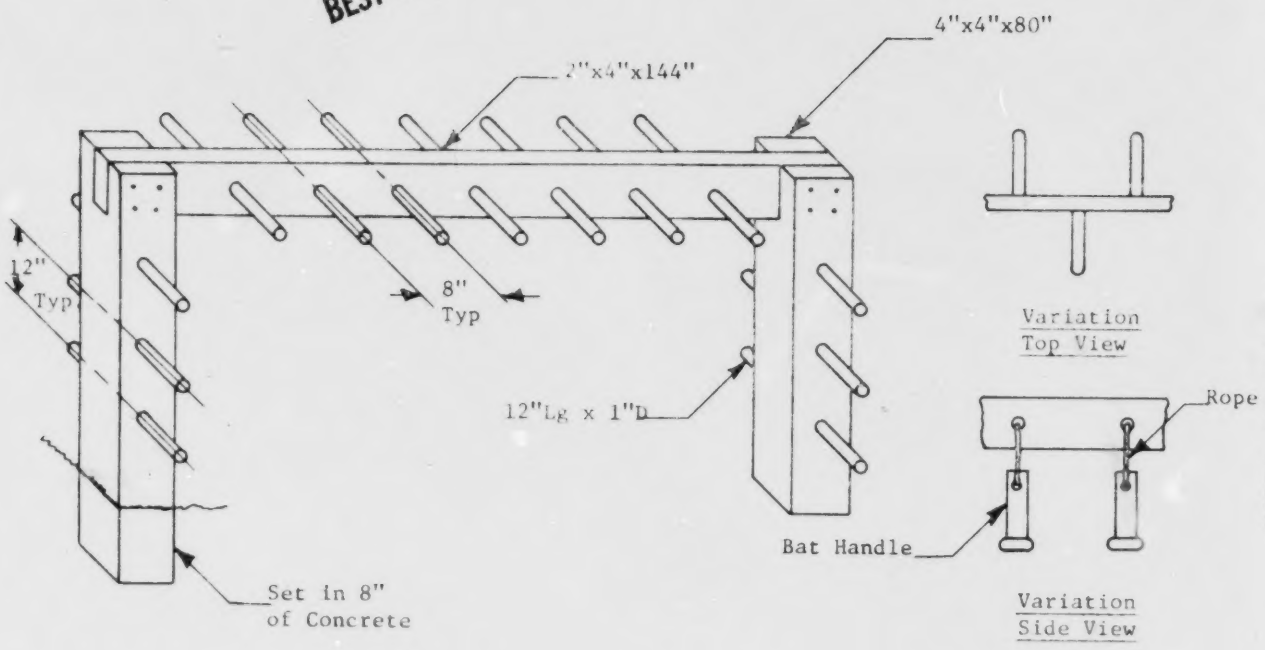

PURPOSE: Develop and improve upper body muscular strength and endurance, general, and eye-hand coordination.

POSSIBLE ACTIVITIES:

- Hand-walk (crawl, creep, walk) across (forward, backward, sideward) in various combinations.
- Use for pull-ups (straight arm hang, flexed arm hang, self-testing activities, stunts).
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Stagger dowels in crossbar to encourage appropriate hand-walk pattern and movements (see top view above).

SAFETY CONSIDERATIONS:

- Place over sawdust, grass, or other soft surface.
- Provide spotting as necessary.
- Shellac dowels to reduce possibilities of splintering.

ATERIALS: Wood, drill, saw, nails, hammer, concrete, wood dowels (broomstick).

PROXIMATE COST: $15.00

ONSTRUCTION HINTS:

- Cut 2" x 4" notch in top of upright and set bottom of upright in concrete.
- Drill crossbar and insert dowels.
- Drive nails from top and through dowels to secure.
- Install crossbar and nail or bolt securely.
- Drill and install dowels in uprights if desired.

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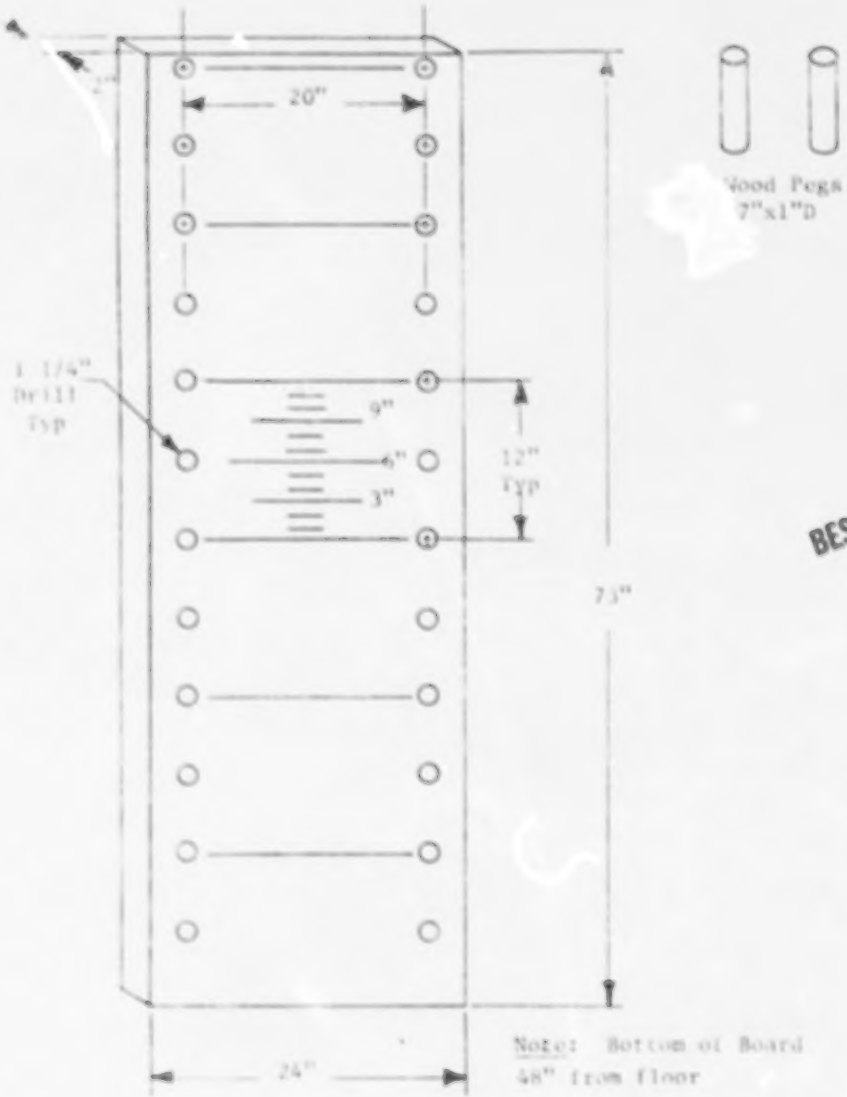

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CLIMB/JUMP BOARD

PURPOSE: Develop and improve general and eye-hand coordination, upper body muscular strength and endurance, and explosive leg power.

POSSIBLE ACTIVITIES:

a. Jump for height--stand by board, reach as high as possible, and then jump, reaching and touching highest point.

b. Climb up board using wood pegs--reach and insert one peg into a hole, pull-up, and insert peg on opposite side.

c. Insert one peg in each side and use for pull-ups (straight arm hang, flexed

POSSIBLE ACTIVITIES: (continued)

arm hang).

- Include as part of confidence (obstacle) course.

HELPFUL HINTS:

- Jump with a piece of chalk in hand to mark height of jump; hold stick, ruler, or other object to challenge jumper.
- Place in horizontal or angle position rather than vertical.
- Construct in varying shapes, figures, and patterns.

SAFETY CONSIDERATIONS:

- Keep area beneath board clear of people and other equipment.
- Provide spotting as necessary.

MATERIALS: Wood, saw, drill, black magic marker, measuring tape.

APPROXIMATE COST: $10.00

CONSTRUCTION HINTS:

- Fasten several sheets of plywood together and then drill holes.
- Use broomstick for pegs.

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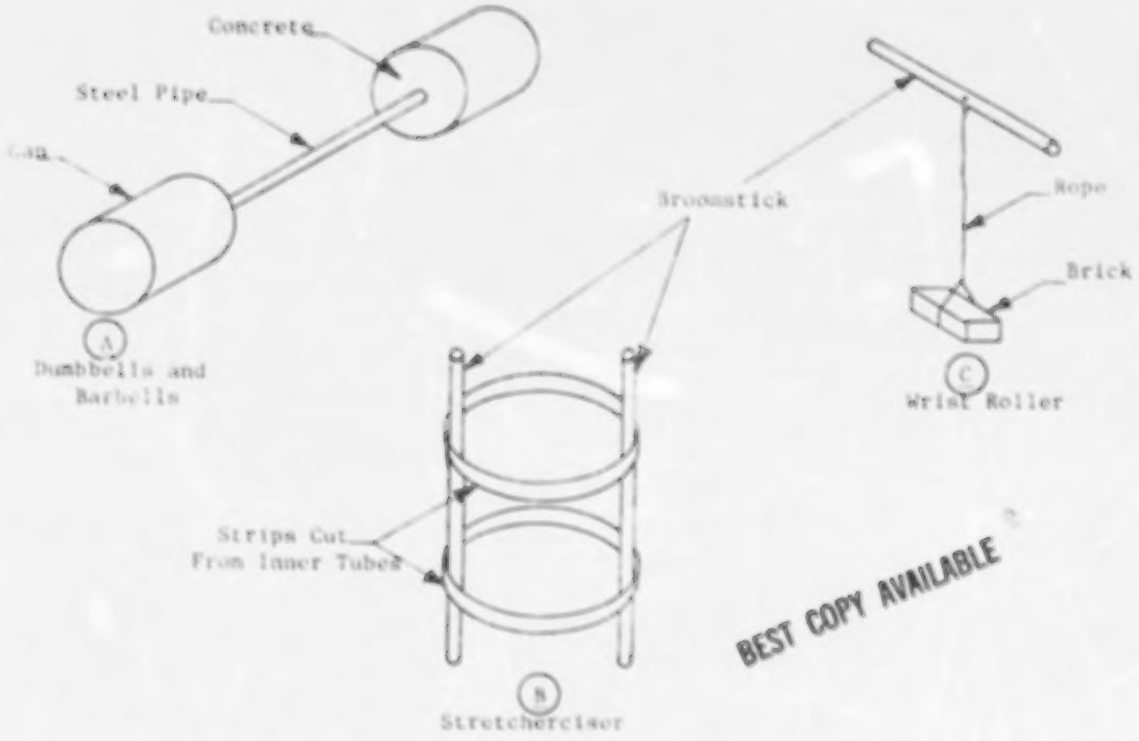

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PURPOSE: Develop and improve flexibility and muscular strength and endurance in specific muscle groups.

POSSIBLE ACTIVITIES:

- Use for Weight or Resistance Training Activities (p.12).
- Develop isometric and/or isotonic patterns.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Vary size of cans for different weights (orange juice, soup, coffee, etc.) (A).
- Tape broomstick to provide hand grips (B and C).
- Add more or wider inner tube strips for greater resistance (B).
- Drill hole through broomstick to attach rope for wrist roller; rotate handle to wrap rope and raise weight.
- Use inner tube strips (whole bicycle tubes) for stretcherciser.

EXERCISE EQUIPMENT

SAFETY CONSIDERATIONS:

- Prevent injury to back, legs, toes, fingers, and damage of floor by handling weights carefully.
- Tack inner tube strips to broomstick to prevent slippage (B).
- Provide spotting as necessary.

MATERIALS: Steel pipe, empty cans, concrete, broomsticks, rope, old inner tube, brick, drill.

APPROXIMATE COST: Varies from $0.00 to ...?

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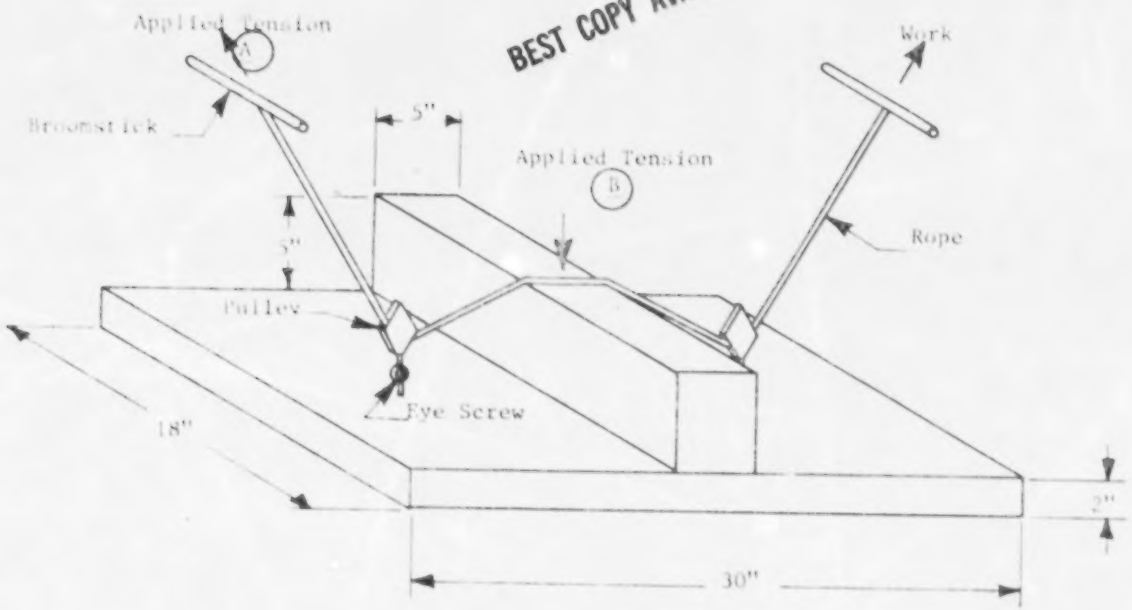

PURPOSE: Develop and improve flexibility and muscular strength and endurance in specific muscle groups.

POSSIBLE ACTIVITIES:

- Use for weight or Resistance Training Types of Activities (p.12).
- Develop isometric and/or isotonic patterns.
- Devise own activities, combinations, and routines.

HELP:

- Have one teammate apply tension at points shown in diagram by pulling up on handle (A) and standing on rope at point (B); second teammate performs exercise by pulling or lifting at handle indicated work; apply enough tension during first 5-10 seconds to prevent any movement (isometric), and then release tension slowly to allow full range of movement (isotonic) for another 5-15 seconds.

SAFETY CONSIDERATIONS:

- Keep fingers clear of pulleys to avoid injury.
- Have one participant position himself so pulley is directly between his feet.
- Draw (paint, use contact paper) footprints on board to aid beginners.

MATERIALS: Eye screws (2), simple pulleys (2), wood, nails, broomstick, rope, saw, hammer.

COST: $5.00

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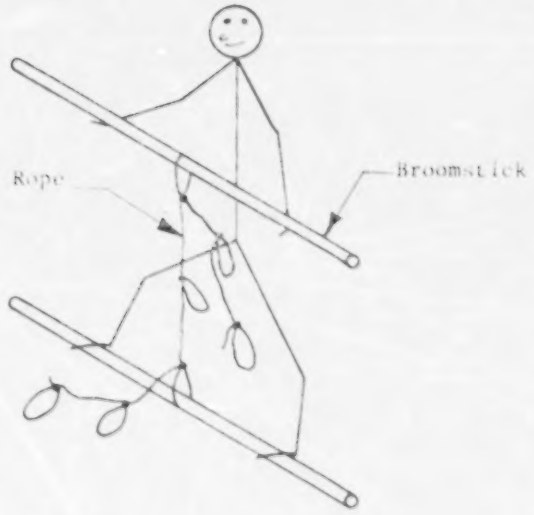

PURPOSE: Develop and improve muscular strength and endurance.

OSSIBLE ACTIVITIES:

a. Use for isometric exercises and for weight or Resistance Training Types of Activities (p.12).

b. Tug of war, combatives, and other competitive activities.

c. Devise own activities, combinations, and routines.

H OL :

a. Tape broomstick to provide hand grips.

SAFETY CO SID :

a. Prevent slippage during performance of activities by securing knots firmly.

MATERIALS: Broomsticks (2), rope (10'-15').

APPROXIM : None

ISOMETRIC EXERCISER

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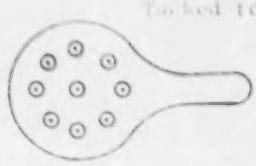

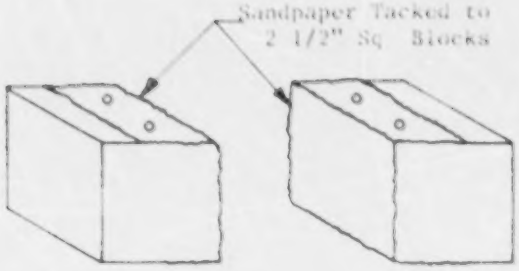

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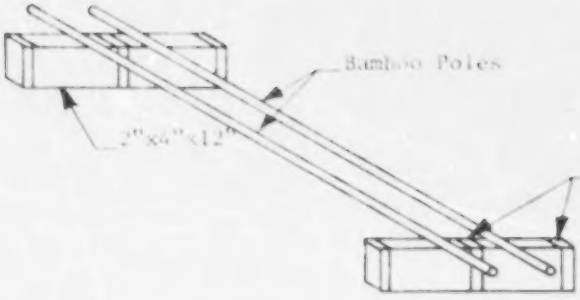

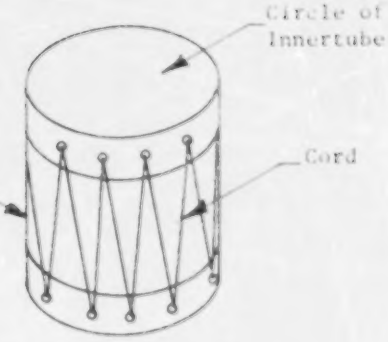

Goal #3: Develop and improve general eye-hand and eye-foot coordination.

POSSIBLE ACTIVITIES:

- Introduce fundamentals of rhythmic activities.
- Use for finishing (Phillipine Stick Dance, Bamboo Hop).
- Use for creative dance.
- Use in movement exploration and problem solving activities.
- Use for activities, combinations, and routines.

HELPFUL HINTS:

- Tape ends of Bamboo Poles to provide hand grips and to prevent splitting.
- Use different size cans for varied drum tones.
- Devise ways participants can learn and practice stick movements (clapping, patty cake, hummi sticks, aluminum pie plates).
- Introduce foot movements with lines marked on floor, (ropes, tile rows on floor, chalk lines, stationary poles).
- Use musical accompaniment (phonograph, cassettes, audiotapes, piano, harmonica, rhythm band).

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MATERIALS: Bamboo poles, wood, cans, cord, inner tube, sandpaper, tacks, bottle caps, hammer, paddle, scissors, paint and brush.

APPROXIMATE COST: $5.00

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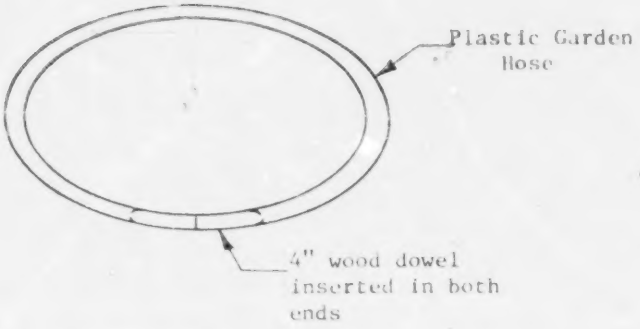

PURPOSE: Develop and improve basic motor skills, fundamental movement patterns and general coordination.

BASIC ACTIVITIES:

- Use for exploration and other problem solving activities.
- Hop (jump, walk, run, crawl, creep) around hoop (from hoop to hoop, in and out of hoop).
- Roll hoop (straight, zig-zag, around objects, in square, triangle, circle, fast, slow).
- Use for hula hoop activities (twirl on various parts of body in different ways).
- Jump hoop (same as jumping rope).
- Use in relays, contest, self-testing activities and low organization games.
- Use as target for ball (bean bag, frisbee, quoit) activities.
- Devise own activities, combinations, and routines.

CONSTRUCTION NOTES:

- Insert dowel completely so hose ends are joined together flush.
- Secure dowel with staples (glue, nails, screws).

MATERIALS: Wood dowel, plastic garden hose, staples, glue, nails, screws.

SAFETY NOTES: None

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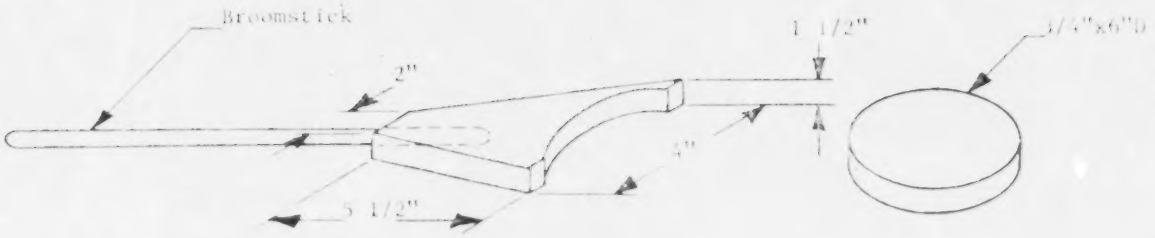

PURPOSE: Develop and improve general and eye-hand coordination.

POSSIBLE ACTIVITIES:

- Play shuffleboard, and related low organized activities and lead-up games.
- Toss bean bags into target areas.
- Use target areas for hopscotch and other jumping/hopping games.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Devise different patterns and various combinations for scoring areas (squares, circles, triangles).
- Drive a 1 1/2" nail down from top and through broomstick handle to secure to pusher.

SAFETY CONSIDERATIONS:

- Use equipment for shuffleboard and not gladiatorial combat.

MATERIALS: Wood, drill, saw, nails, hammer, tape or paint.

APPROXIMATE COST: $1.00 for 4 cues and 10 pucks.

SHUFFLE BOARD

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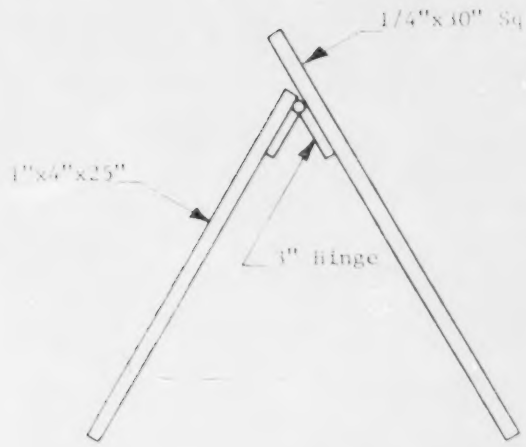

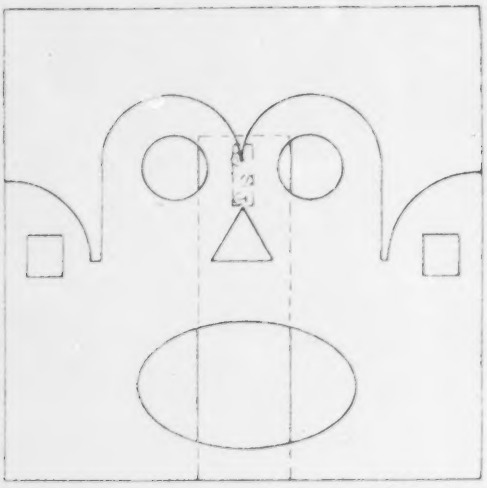

PURPOSE: Develop and improve general and eye-hand coordination and throwing skills.

POSSIBLE ACTIVITIES:

- Use for bean bag toss games.
- Crawl (creep) through mouth or under support.
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Vary types of throws (overhand, underhand, left hand, right hand, over head, behind back).
- Change point values for different geometric shapes; vary to emphasize specific shapes (sizes, colors, numbers, letters, combinations).
- Make own bean bags or use other objects (balls, erasers, snowballs, rolled-up paper, bottle caps).
- Attach cord to bean bags so children with limited mobility can retrieve own objects.
- Use different shapes (round, cone, diamond) and/or designs.
- Devise sound (bell, chimes) reinforcement when object passes through opening in target.

MATERIALS: Wood, saw, hinge, screws, screwdriver, paint brush, paint.

APPROXIMATE COST: $3.00

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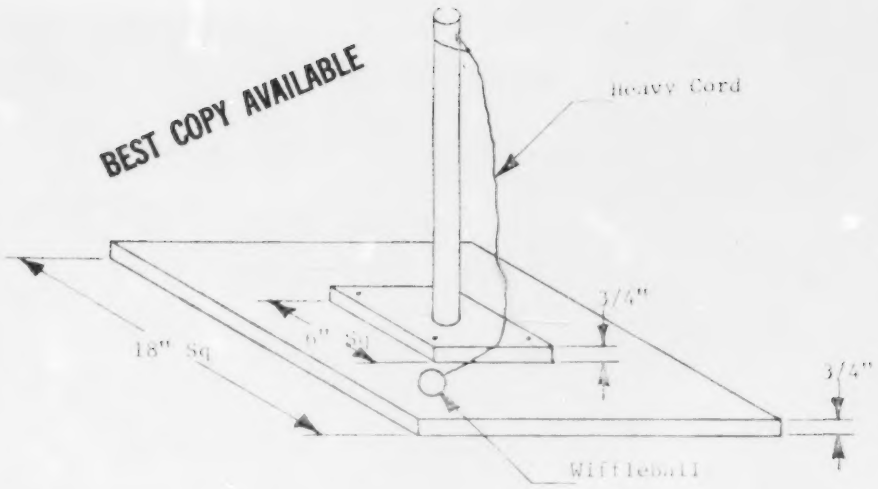

PURPOSE: Develop and improve general and eye-hand coordination.

POSSIBLE ACTIVITIES:

- Play Tetherball (with or without paddles).
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Vary size of ball, center post, or base to meet individual needs.
- Use paddles of different sizes and with varying handle lengths to increase challenge or make easier.
- Encourage ambulatory and non-ambulatory youngsters to participate together.

SAFETY CONSIDERATIONS:

- Fasten center post, cord, and ball securely before use.
- Attach (bolt, clamp) base to table.

MATERIALS: Wood, broomstick, cord, ball, drill, nails, hammer.

APPROXIMATE COST: $3.00

CONSTRUCTION HINTS:

- Drill base hole same diameter as broomstick; insert for use and remove for storage.
- Drill end of broomstick and tie cord securely.

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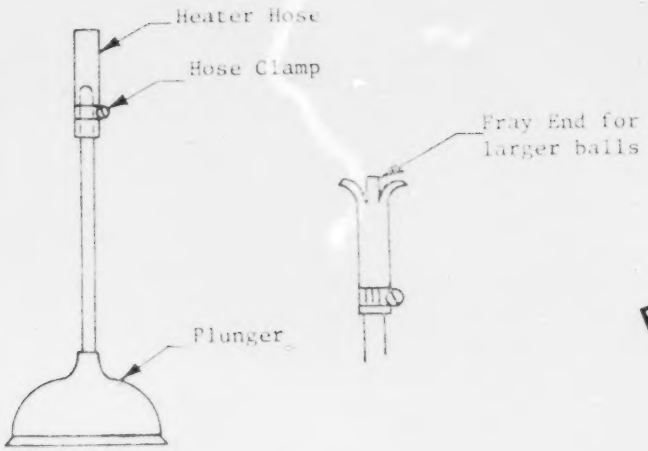

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BATTING TEE

PURPOSE: Develop and improve general and eye-hand coordination.

POSSIBLE ACTIVITIES:

- Develop striking (batting) skills (hand-ball, bat-ball, racquet-ball).
- Develop throwing skills--knock ball off tee with another ball.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Loosen clamp to adjust height.
- Use traffic cone, weighted bleach bottle, and plastic golf club protector for tee; place traffic cone or bleach bottle on box to adjust to appropriate height for participant.
- Attach ball with string (rope) to tee or wheelchair for partial or non-ambulatory youngsters.

SAFETY CONSIDERATIONS:

- Keep area around and in front of tee clear of other students.

MATERIALS: Plunger, radiator hose, hose clamp.

APPROXIMATE COST: $3.00

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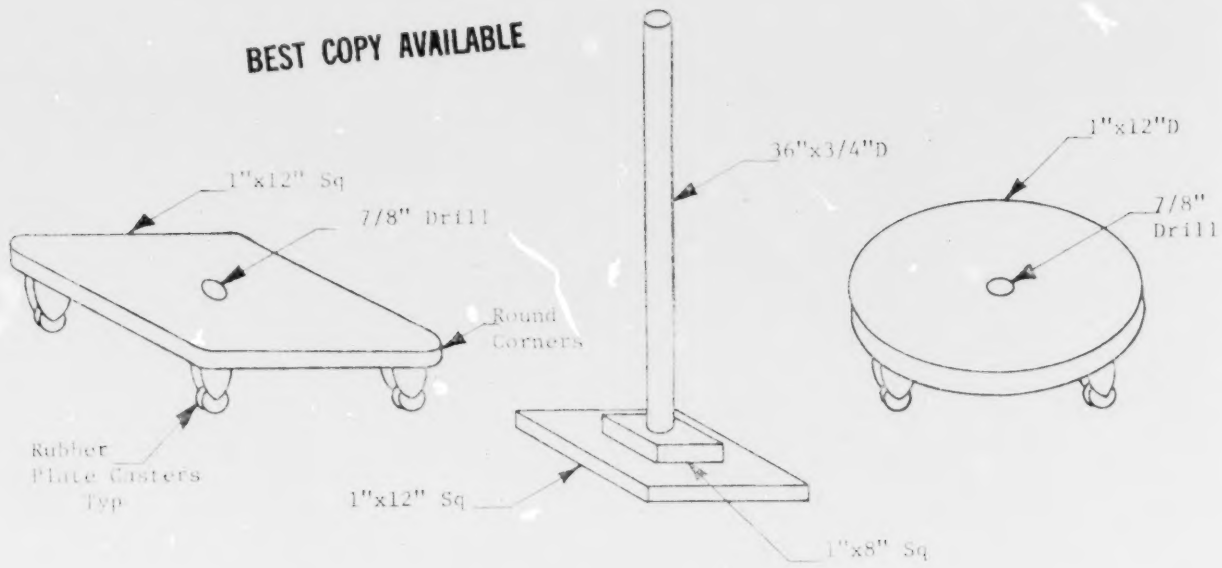

PURPOSE: Develop and improve agility, general coordination, and cardiorespiratory endurance. Provide added mobility for participants who are physically limited.

POSSIBLE [illegible]

- Use for games (relays, races, tag, scooter hockey, low organized activities, lead-up games)--modify any activity or game requiring running.
- Introduce swimming movements, patterns, and skills.
- Use for developmental activities (homolateral, cross pattern, laterality directionality movements, physical fitness).
- Include as part of confidence (obstacle) course.
- Devise own activities, combinations, and routines.

HELPFUL HINTS:

- Use in moving heavy objects (mats, boxes of equipment).
- Adjust shape to meet participant needs (triangle and three wheels, long for riding down).

SAFETY CONSIDERATIONS:

- Prohibit standing on boards.
- Keep fingers away from edges.

SCOOTER BOARDS

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SAFETY CONSIDERATIONS: (continued)

- o Attach tire strips to edge of board to provide bumpers.

MATERIALS: Wood, rubber plate casters, screws, screwdriver, saw, wood dowel or broomstick, drill.

APPROXIMATE COST: $2.00 each

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ANNOTATED BIBLIOGRAPHY

Bittner, Linda, et. al. Innovative Playground Equipment for Elementary Schools. Ocala: The Physical Education Competence Curriculum Center, 1971.

Includes photographs of 17 pieces of equipment, a statement of purpose or function, suggested activities, and a detailed drawing and specifications.

Christian, Quentin A. The Beanbag Curriculum: A Homemade Approach to Physical Activity for Children. Wolfe City: The University Press, 1973.

Includes hundreds of activity ideas centered around the use of homemade equipment such as broomsticks, hoops, beanbags, streamers, flash cards, rug squares, ropes, tires and 15 other items. Each section includes construction methods, activities, photographs, and illustrations.

Corbin, Charles B. Inexpensive Equipment for Games, Play and Physical Activity. Dubuque: Wm. C. Brown Company Publishers, 1973.

Provides illustrations and construction, needed materials, useful activities and teaching suggestions of inexpensive equipment for physical education and recreation.

Frederick, A. Bruce. 212 Ideas for Making Low-cost Physical Education Equipment. Englewood Cliffs: Prentice-Hall Inc., 1963.

Provides information and illustrative material about homemade equipment for use in: (1) aquatics, (2) games of low organization, (3) gymnastics, (4) individual and dual sports, (5) rhythmics, and (7) team sports. Most equipment described can be built inexpensively, with simple tools, from easily obtained materials, and without special industrial arts training.

Herron, Charles E. A Compilation of Adapted Equipment for Physically Handicapped Children: Historical References and Implications for Utilization in Physical Education as a Component of Special Education. University of Alabama, Department of Special Education, June 1969.

Includes brief history and philosophy of adapted physical education and a compilation of drawings of manufactured and homemade equipment that can be utilized in physical education and recreation programs for handicapped persons.

Miller, Peggy L. Creative Outdoor Play Areas. Englewood Cliffs: Prentice-Hall, Inc., 1972.

Contains pictorial sketches and photographs of play areas and individual pieces of equipment along with suggestions on what can be done, why it is essential, and how to achieve wholesome, creative play areas for children.

van der Smissen, Betty and Helen Knierim. Fitness and Fun Through Recreational Sports and Games. Minneapolis: Burgess Publishing Company, 1964.

Rules and directions for conducting various recreational sports and games are included along with sketches and plans for constructing equipment needed in the listed activities.

Van Hagen, Winifred, Genevie Dexter and Jesse Feiring Williams. Physical Education in the Elementary School. Sacramento: California State Department of Education, 1953.

Many ideas and plans for the construction of equipment for various sports and recreational activities are described.

Vannier, Maryhelen and Mildred Foster. Teaching Physical Education in Elementary Schools. Philadelphia: W. B. Saunders Company, 1963.

One chapter of this publication is devoted to inexpensive, innovative games for physical education and recreation. All of the equipment for these games can be easily constructed by upper elementary students.

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Appendix A

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*Positions at time contributions were submitted

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Appendix B

APPRAISAL GUIDE

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Respondent _____

Title _____

Organization _____

Address _____

_____

_____

APPRAISAL FACTORS	RATINGS				COMMENTS
	Out-standing	Very Good	Satis-factory	Very Poor	Give comments for Out-standing and Very Poor
Format					
Practical					
Useful					
Clarity					

What is the extent of repetition of already existing materials?

Mostly New _____

Some New _____

Mostly Repetitious _____

How can this publication be strengthened? _____

_____

_____

Additional comments and recommendations: _____

_____

_____

_____

Send to: Director
Information and Research Utilization Center in Physical Education and Recreation for the Handicapped
c/o AAHPER Unit on Programs for Handicapped
1201 16th Street, N.W.
Washington, D.C. 20036

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Appendix C

SUGGESTIONS FOR ADDITIONAL EQUIPMENT

BEST COPY AVAILABLE

Respondent _____

Title _____

Organization _____

Address _____

_____

_____

Name and purpose of equipment: _____

_____

Drawing and/or photograph of equipment including dimensions:

Needed Materials: _____

Approximate Cost: _____

May this idea be published? Yes_____ No_____

Send to: Director
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c/o AAHPER Unit on Programs for the Handicapped
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Appendix D

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CLASSIFICATION INDEX

In this section the reader can find devices and equipment described in this publication indexed by purpose. This listing is only suggestive of possible purposes and potential uses. In every instance additional skills and concepts can be developed through different uses and varied approaches for each device or piece of equipment. By making additional modifications, the same apparatus can become effective in attacking other problems and in placing emphasis upon other skills and concepts. Regardless of the activity, it is of utmost importance that the instructor/leader knows reasons he is using an activity and that he communicate this to the individual participant or group in terms they understand.

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Appendix D

	Balance Boards	Teeter Boards	Balance Beam	Slanted Balance Beam	Slant Ramp	Sinking Tires	Stilts	Swinging Bridge	Logs	Walking/Climbing Board	Stairs	Buckin Broncho
Static Balance	X	X	X	X	X	X	X	X	X	X	X	X
Dynamic Balance	X	X	X	X	X	X	X	X	X	X	X	X
Eye-Hand Coordination	X	X	X	X	X	X	X	X	X	X	X	X
Eye-Foot Coordination	X	X	X	X	X	X	X	X	X	X	X	
General Coordination	X	X	X	X	X	X	X	X	X	X	X	X
Power/Speed											X	
Muscular Endurance											X	
Cardiorespiratory Endurance											X	
Flexibility	X	X	X	X	X	X	X	X	X	X	X	X
Agility			X	X	X	X	X	X	X	X	X	X
Rhythm												X
Games	X	X	X	X	X	X	X	X	X	X	X	X

Appendix D

	Static Balance	Dynamic Balance	Eye-Hand Coordination	Eye-Foot Coordination	General Coordination	Power/Speed	Muscular Endurance	Cardio-respiratory Endurance	Flexibility	Agility	Rhythm	Games
Wiggley Wobbley	X	X	X	X	X	X	X	X	X	X	X	X
Jump Drum	X			X	X	X	X	X		X	X	X
Spring Bed	X	X		X	X	X	X	X		X	X	X
Vaulting Horse and Box	X		X	X	X	X			X	X		X
Hurdles			X	X	X	X		X	X	X		X
Jumping Standards			X	X	X	X				X		X
Climber	X	X	X	X	X				X	X		X
Climbing Tower	X	X	X	X	X				X	X		X
Climbing Wall			X	X	X				X	X		X
Adjustable Monkey Bars	X	X	X	X	X	X	X	X	X	X		X
Rope Climber			X		X		X					X
Rope Disc												X

Appendix D

	Static Balance	Dynamic Balance	Eye-Hand Coordination	Eye-Foot Coordination	General Coordination	Power/Speed	Muscular Endurance	Cardiorespiratory Endurance	Flexibility	Agility	Rhythm	Games
Climbing Frame	X	X	X	X	X				X	X		X
Overhead Ladder	X	X	X	X	X		X		X	X		X
Swinging O-H Ladder	X	X	X	X	X		X		X	X		X
Peg O-H Ladder	X	X	X	X	X		X		X	X		X
Climb-Jump Board			X		X	X	X		X	X		X
Barbell, Dumbbell					X	X	X					
Stretcherciser					X	X	X					
Wrist Roller					X	X	X					
Team Exercise					X	X	X					
Isometric Exercise						X	X					
Paddle Rattle			X								X	X
Tinikling Set			X	X	X					X	X	X

Appendix D

	Static Balance	Dynamic Balance	Eye-Hand Coordination	Eye-Foot Coordination	General Coordination	Power/Speed	Muscular Endurance	Cardiorespiratory Endurance	Flexibility	Agility	Rhythm	Games
Drum			X								X	X
Sand Paper Blocks			X								X	X
Hoops	X	X	X	X	X				X	X	X	X
Shuffle Board			X									X
Target Toss			X									X
Mini Tetherball			X									X
Batting Tee			X									X
Scooter Boards					X				X	X		X